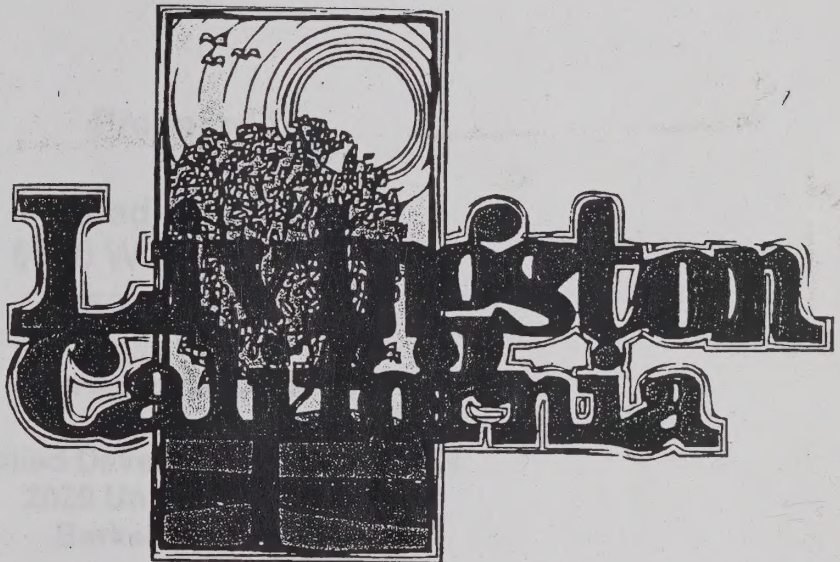


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GENERAL PLAN



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CHAPTER 1

INTRODUCTION

1.0

INTRODUCTION

1.1 OVERVIEW OF THE UPDATE PROCESS

The General Plan is a long-term, comprehensive framework to guide physical, social and economic development within a community's Planning Area. The City of Livingston's General Plan is a long-range guide for attaining the City's goals within its Sphere of Influence and accommodating its population growth to the year 2020. A comprehensive document, it coordinates all components of the City's physical development and sets objectives, policies and standards which guide future growth within the City's Planning Area.

In January, 1998, the Livingston City Council authorized an update to the City's General Plan and associated elements including Land Use, Circulation, Open Space and Conservation, Housing and Safety, Noise, Community Design, Public Services and Facilities.

The City Council appointed a General Plan Review Committee to work with staff and Quad Knopf, Inc., the General Plan consultant. The Committee consisted of representatives from the City Staff, the Planning Commission, City Council, Livingston public schools and Livingston Chamber of Commerce. The General Plan Review Committee has provided crucial input and review to all aspects of the General Plan.

In addition, before preparing the draft General Plan update, Quad Knopf met with local service clubs, held a workshop and four town hall meetings. These preliminary activities were held to discuss and to seek public input into the planning process. The workshops were facilitated by the General Plan consultant team. Members of the public at large were asked a series of questions relating to the quality of life in Livingston such as what things were important to maintain and what would they change in Livingston if money were no object. Participants in the workshop were also asked to design a plan for the future of Livingston using drawing paper, colored markers, and magazine clippings.

Using the results of the workshops, the consultant team developed a series of working papers that were released at intervals during the process. The working papers included a *Preliminary Development Forecasts/Community Concern Summary*, a *Draft Background Report*, and a *Constraints and Opportunities Report*. These papers were distributed to the General Plan Review Committee, for its consideration and approval. The last paper, the *Constraints and Opportunities Report*, served as the foundation for the General Plan update and was also approved by the Planning Commission and City Council and subject to two noticed town hall meetings. The Draft

Background Report is included in the General Plan as Chapter 2 *Environmental Setting and Background*.

1.2 BASIS FOR THE GENERAL PLAN

While many residents cherish the “small town” character of the city, they also find commercial and recreation opportunities are limited because of the city’s size and the effects of State Highway (SH) 99 realignment. The rerouting of SH 99 has resulted in major transformation of the city’s center removing twenty housing units and relocating thirty-five businesses. The realigned SH 99 poses challenges to Livingston and provides a unique opportunity to direct growth in a manner that will promote a sustainable future. The General Plan update will include, in addition to more traditional topics and issues, modified land use controls that will focus economic development to capture lost sales tax revenue currently generated by Livingston residents shopping outside of the city, and increase employment and housing opportunities. Policies to evaluate development on the City’s public services will also be included in the General Plan.

The determination of the study area boundary for the General Plan Update was guided by the following factors:

- ▶ Existing development in the area, including unincorporated areas;
- ▶ Major physical features in the community including the Merced River;
- ▶ Hard edges including major roadways;
- ▶ Undeveloped areas necessary to square off the development boundaries; and
- ▶ Areas within which the city may likely grow over the next 30 years.

The General Plan map shows the results of this analysis and includes the city’s current growth boundaries such as the city limits and the adopted Specific Urban Development Plan (SUDP) lines. The General Plan includes enough land to meet the City’s development needs over the planning period of twenty years and a geographical territory to enable city review of development proposals that may occur in the County adjacent to the city limits. The Sphere of Influence, the outer limits of the City’s Planning Area, serves as the catalyst for future planning discussion. The Study Area also provides sufficient flexibility to review alternative growth scenarios that would focus growth in either the northern or southern sections of the community, along the SH 99 axis, or other alternatives identified by the community.

The first step in the General Plan update process was the preparation of a *Preliminary Development Forecast* to estimate the demand for various land uses in the City of Livingston. Based upon the results of this study the City was able to determine the residential pattern needed to complement a proposed retail/commercial and industrial land use configuration that was most likely to generate a stable economic base for the community. The General Plan map reflects the land uses needed to support the City’s targeted retail/commercial and industrial employers. This approach reflects the City’s commitment to increase its revenue base, which will support future demand for services, thus maintaining and enhancing Livingston’s quality of life.

1.3 ISSUES OF IMPORTANCE

Using the results of the work program, workshops and steering committee meetings discussed above, City staff and the general plan consultant concluded the following issues to be of greatest importance when drafting policies for the General Plan update:

Agricultural Preservation - Agriculture and its related industries were determined to be crucial to the character of the City of Livingston and its surroundings, and the key to the economic vitality of the community. Agriculture and agricultural-related industries were determined to be the most important employment base for the City of Livingston.

Contiguous Planning - In order to maintain a vital economy, preserve surrounding agricultural lands, maintain a healthy quality of life, and minimize public service and facility costs, it was determined that future growth within the Livingston Planning Area should be contiguous to existing development, making the best possible use of existing vacant lands within the City limits and allowing the City to provide services to new development at the most cost-effective, efficient manner possible. The economic vitality of the City is best served by concentric growth, which maintains the existing downtown as the center of the community.

Public Facilities - A key policy throughout all elements of the General Plan is the need for development to "pay its own way." New development will be directed to develop in areas which can adequately accommodate the increased demand on public services and facilities. Ten year and twenty year urban improvement boundaries have been established based upon the capabilities of the City to accommodate new growth. Development will be required to contribute to the cost of providing facilities called for in the General Plan.

Neighborhood Development - As Livingston increases in size from 10,550 in 1998 to over 23,000 in 2020, neighborhood planning will become a key component. Street planning will provide needed connectivity between neighborhoods

The downtown will decrease its primary role as a neighborhood shopping area and transition to a community center for government, office and limited commercial uses. New centers on Winton Parkway, Hammatt Avenue, and Main Street north of SH 99, will provide for the city's growing commercial land use needs.

1.4 ORGANIZATION OF THIS DOCUMENT

State law requires all cities and counties to adopt and maintain a General Plan. The document is structured to contain background information to support the General Plan update and its Environmental Impact Report.

Chapter Two, *Environmental Setting and Background*, contains background information compiled for the Draft Background Report phase of the Livingston General Plan update. It describes the existing conditions that apply to the subject areas to be addressed in the Plan, and also serves as the

“environmental setting” portion of the Environmental Impact Report (EIR) to be prepared for the General Plan Update. This chapter is organized to correspond to major headings that will appear in the EIR.

Chapters 3-11 contain the mandatory elements of the General Plan: Land Use, Circulation, Conservation and Open Space, Recreation, Urban Boundary, Noise, Safety, and Housing Elements. New elements were added including Community Design and Public Services and Facilities.

It is noted that the Housing Element was not included into the update process. This element was found to be adequate and will be updated when Merced County’s regional allocation of housing needs is completed in the near future. Its existing goals and policies have been included into the General Plan.

Each chapter contains the objectives, policies, and standards of the General Plan as determined by the efforts of the City staff, General Plan Review Committee, various public workshops and General Plan consultant team.

ENVIRONMENTAL SETTING AND BACKGROUND

2.0 ENVIRONMENTAL SETTING AND BACKGROUND

The City of Los Angeles is located in the San Gabriel Valley, a region of the Southern California coastal plain. The city is situated in the foothills of the San Gabriel Mountains, which are part of the larger Sierra Nevada range. The city is located in the San Gabriel Valley, a region of the Southern California coastal plain. The city is situated in the foothills of the San Gabriel Mountains, which are part of the larger Sierra Nevada range. The city is located in the San Gabriel Valley, a region of the Southern California coastal plain. The city is situated in the foothills of the San Gabriel Mountains, which are part of the larger Sierra Nevada range.

2.1 LAND USE

2.1.1 Present Land Use General Plan

The City of Los Angeles is located in the San Gabriel Valley, a region of the Southern California coastal plain. The city is situated in the foothills of the San Gabriel Mountains, which are part of the larger Sierra Nevada range. The city is located in the San Gabriel Valley, a region of the Southern California coastal plain. The city is situated in the foothills of the San Gabriel Mountains, which are part of the larger Sierra Nevada range.

CHAPTER 2

ENVIRONMENTAL SETTING AND BACKGROUND

ENVIRONMENTAL SETTING AND BACKGROUND

Project Location and Description

The City of Livingston is located along State Highway 99 (SH 99) in north central Merced County. The City is bisected by SH 99, a major north-south interstate transportation artery, and by the Southern Pacific Railroad. Incorporated as a general law city in 1922, Livingston is centrally located between Stockton and Fresno in the San Joaquin Valley along the Highway 99 corridor. The current population is 10,490. Livingston lies in a highly productive agricultural region and is poised to transition from a small town to the service center of the surrounding community. The city limits currently contain approximately 3.5 square miles, with approximately 480 acres of residential land, 150 acres of commercial land, and 200 acres of industrial land available for development.

2.1 LAND USE

2.1.1 Present Livingston General Plan

The City of Livingston General Plan, last revised in September 1988, is the current comprehensive plan governing the community. State law requires a general plan to possess Land Use, Circulation, Housing, Conservation/Open Space, Noise, and Safety elements, as either separate elements or combined as a community sees fit. Used as a guide for orderly development, Livingston's Land Use Element designates the general distribution of land for residential, commercial, industrial, and governmental development as well as the public facilities needed to serve the residents of the city. The plan includes land outside the City's boundaries, providing a comprehensive growth and development plan.

In addition to the General Plan, the city has adopted the following additional plans and policy statements:

- ▶ 1992 Sewer Collection System Study and Master Plan and its 1996 addendum (Lew-Garcia-Davis)
- ▶ 1992 Water Distribution System Study and Master Plan (Lew-Garcia-Davis)
- ▶ 1992 Storm Drain Collection System Study and Master Plan (Lew-Garcia-Davis)
- ▶ 1993 Parks and Recreation Master Plan 1994-2003 (Floyd Davis, Jr., P.E.)
- ▶ 1997 Livingston Community Redevelopment Plan (Urban Futures, Inc.)

2.1.2 Present City Land Use Controls

Land within the city limits are governed by the Livingston Zoning Ordinance and the 1994 Uniform Building Code. The Zoning Ordinance is used to implement the General Plan. It divides the city into zones and prescribes regulations relating to land use, the size of the building allowed on the land, and the height and intensity of use. Re-zonings must be consistent with the General Plan. Like the Plan, the zoning ordinance is periodically amended to reflect changes in urban development standards and community values.

The Building Code prescribes construction and safety standards for new development and the administration of building inspection programs.

2.1.3 Existing Land Use within Current City Limits

The current city limits hold about 2,330 acres. Table 2-1 indicates that this existing land uses include about 381 acres of residential, 27 acres of commercial, 109 acres of industrial, 20 acres of parks, and 114 acres of public facilities. Figure 2-1 illustrates the distribution of these uses.

Between the city limits, out to the Sphere of Influence, land uses are predominantly agricultural (670 acres) with about 20 acres in residential uses.

As with most cities in California, the detached single-family home is the predominant residential unit in Livingston.

2.1.4 Merced County General Plan and Zoning Ordinance, Implications

Merced County is responsible for planning and land use control in the unincorporated areas of the county. Urban development in the unincorporated area is guided by County policy toward existing cities and urbanized areas. Lands outside of the Livingston City limits but located within the city's Specific Urban Development Plan (SUDP) are found by the County to be appropriate for urbanization.

The Merced County Year 2000 General Plan uses an urban centered concept to direct urban expansion toward cities and unincorporated communities "to accomplish anticipated urban expansion in an orderly manner, based on the ability of these communities to furnish public services along with land needs based on population demands and in balance with employment-generating land uses." As a planning tool unique to Merced County, the SUDP is intended to accommodate all classifications of urban land use. It is "a boundary line which is recognized as the ultimate growth boundary of the community over the life of the (General) Plan, and all land within the SUDP is planned for eventual development in a mixture of urban and urban related uses."

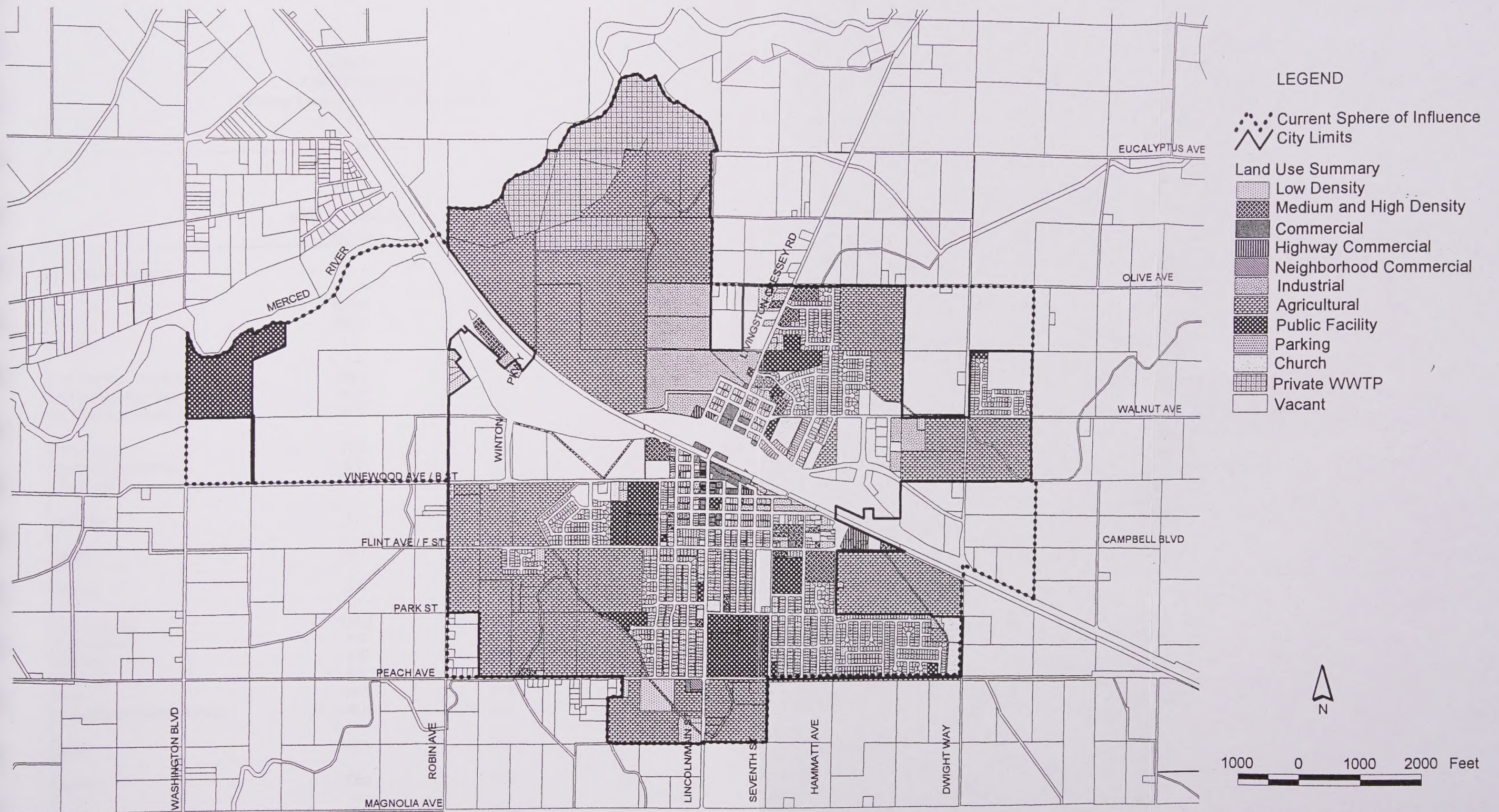


TABLE 2-1
City of Livingston
Existing Land Use Totals (all in acres)

	Within the Sphere of Influence	Within the City Limits	Between the Sphere of Influence and the City Limits
Land Use Category			
Agriculture	977.5	300.0	677.5
Orchard	507.8	507.8	0.0
Irrigation	1.7	1.7	0.0
Low Density Residential	359.1	343.3	15.8
Medium Density Residential	11.0	7.7	3.3
High Density Residential	31.7	30.5	1.1
Commercial	19.6	19.6	0.0
Highway Commercial	6.0	6.0	0.0
Neighborhood Commercial	1.1	1.1	0.0
Industrial	111.1	109.7	1.4
Church	15.7	15.7	0.0
Parking	0.8	0.8	0.0
Public Facility	114.2	114.2	0.0
Civic Center	1.3	1.3	0.0
City Well	0.6	0.6	0.0
Drainage	5.1	5.1	0.0
Park	19.3	19.3	0.0
Wastewater Treatment Plant	40.0	29.0	0.0
SPRR	42.1	29.2	12.9
School	73.0	73.0	0.0
Vacant	251.5	228.5	23.0
Total	2590.1	1844.0	699.1
Right-Of-Way	528.9	485.6	43.3
Total in sphere (including city)	3119.0	2329.6	742.4

2.1.5 Sphere of Influence

The Sphere of Influence is defined in the California Government Code Section 56076 as “a plan for the probable ultimate physical boundaries and service area for a local agency as determined by” the Local Agency Formation Commission (LAFCo). Annexations to the city must be located within the Sphere of Influence in order to be approved by LAFCo. By State law, the City must be notified of any proposed land uses changes within its Sphere of Influence and provided an opportunity to comment on the changes.

The Merced County LAFCo reviews changes to Sphere of Influence and Specific Urban Development Plan boundaries, annexations to cities and special districts in Merced County, the adequacy of public services to proposed annexations, and the effect of these actions on prime agricultural land. LAFCo has adopted Local Goals, Objectives and Policies to guide its decision-making. These are:

1. Planned, well-ordered, efficient development patterns.
2. Governmental services are delivered efficiently and effectively and effectively.
3. The need to provide for urban development is balanced with the conservation of open space lands.

Applications to amend city limits, for example, are presented to LAFCo, which then approves, approves with conditions, or denies the applications.

The conversion of ag lands to urban uses and the provision of urban services by growing communities are important issues to the county and LAFCo. Potential revenue losses to counties resulting from annexations have created problems in the relationship between cities and counties in California, and Merced County is no different. During the General Plan update, the implications of the post-Prop 13 fiscal environment to the City of Livingston can be seen as an opportunity to create a more predictable revenue-expenditure model. Such a model may provide a more robust platform to base long-range planning decisions. Los Banos and Merced have executed tax-sharing agreements to facilitate their planned urban growth. Livingston’s planned growth will, at some time, require annexation to the city. A revenue distribution agreement between the City and County will provide both parties with two advantages. First, long range planning in the Livingston Sphere of Influence will occur with a vision shared by both parties and with a revenue stream that can be relied on for the duration of the agreement. Second, an agreement will permit both parties to focus their limited resources on to other matters; its absence will necessitate that the city and county coordinate their planning programs on a piecemeal fashion.

Activities by cities that are consistent with LAFCo policies are typically less controversial than others.

Using a grant from the California Department of Conservation, Merced County will be preparing a Resource Conservation Model to determine the relative value of agricultural lands in the County that are or will be proposed for urbanization. Measures to mitigate ag land conversion, including

the use of agricultural easements, will be set forth in the model. The development and application of this model will take place concurrently with the Livingston General Plan update.

2.1.6 Regional Plans

In 1972, the Merced County Association of Governments (MCAG) was designated as the Regional Transportation Planning Agency for Merced County by State of California. The State requires that MCAG prepare the 1996 Merced County Regional Transportation Plan (RTP) to provide a comprehensive long-range view of transportation issues, opportunities and needs for Merced County. The RTP identifies goals, objectives and policies for future transportation improvements within its 20-year horizon. The plan addresses actions that must be taken, and the funding needs and options available for successful implementation.

It is the responsibility of local, state, and federal governments to implement the RTP. This is accomplished at the level of the Livingston General Plan by participation in the development of the Policy, Action, and Financial Elements and in evaluating private development and public improvements in light of these elements.

2.1.7 Other Agencies' Relationship to Livingston's General Plan (Federal and State Plans Regarding Public Lands and Facilities)

A number of state and federal agencies' activities bear on Livingston's general planning issues. These include, but are not limited to, the Regional Water Quality Control Board, Department of Health Services, California EPA, the San Joaquin Valley Unified Air Pollution Control District, and the Merced Irrigation District. These agencies are interested in the interaction of the General Plan with their own long-range resource management activities. Generally, these agencies will comment on development proposals advanced by the City of Livingston. They will likely advise the City whether a future development is consistent with their plans, whether an impact to their particular resource will occur, and what condition or proposal modification will lessen the impact.

Further, many of these agencies have made technical guidelines available in order to assist the public and private sectors to manage development with natural resources in mind.

2.2 URBAN DESIGN ANALYSIS

2.2.1 Review and Evaluation of Studies, Plans and Programs Undertaken to Date for Urban Design Improvements for Livingston

The Livingston Community Redevelopment Agency (Agency) was established to eliminate existing blighted conditions, provide public services and facilities, enhance the visual impact of the project area, and preserve and enhance historic structures. In 1985, the Agency adopted a redevelopment area (Original Plan) covering 182 acres, much of it in downtown. In 1997, it amended the Original Plan and added approximately 100 acres as Amendment No. 1.

Pursuant to Section 33490(a)(1), in December, 1997, the Agency adopted a five year Implementation Plan to meet the objectives of the Agency for the Project Area requirements for each project area. The Implementation Plan describes goals and objectives of the agency for the project area, including potential projects and estimated expenditures to be made during the next five years.

The 1993 Livingston Downtown Revitalization Plan was completed in order to keep the downtown viable in the face of inevitable pressure for commercial development at the new freeway interchanges. It examines demographics, market area, and makes recommendations to strengthen the civic center.

In general, the goals of the Redevelopment Plan are consistent with those of the General Plan. They both serve to protect the public welfare and promote the logical provision of urban services to residents and property owners in the city. The primary difference is that the Agency has been granted specific powers by the California Community Redevelopment Law to implement the Redevelopment Plan by activities that are scheduled and funded in the Implementation Plan. The Agency has the power to acquire property, to allocate funds, and carry out the physical improvements to public and private property that are set forth in the Implementation Plan.

The General Plan, on the other hand, establishes goals, policies and implementation measures that are used to evaluate development of private property within the city and the scope of public improvements needed to serve the city at the build out of its sphere of influence.

2.2.2 Inventory and Analysis of Urban Form and Structure Issues and Opportunities

Incompatible land uses, urban blight and needed public infrastructure have been identified in the redevelopment area. Opportunities to remedy these have been presented in the Amendment No. 1 to the Redevelopment Plan report. Redevelopment projects are summarized as follows:

Infrastructure Improvements

- Street widening
- Street reconstruction and resurfacing
- Drainage system improvements
- Traffic signal improvements
- Undergrounding of utilities

Community Facilities Program

- Improvement of community facilities
- Recreation, cultural and educational facilities

Community Development and Beautification Programs

- Relocation assistance for residential, commercial, and industrial improvement programs
- Rehabilitation and expansion loan and grant programs
- Demolition of vacant or deteriorated commercial and industrial structures
- Graffiti abatement

Housing Programs

No less than 20% of all tax increment will be used to increase, preserve and improve the community's supply of low and moderate income housing

2.2.3 Existing Functional Relationships Within the City, Including the Relationship of Downtown to Contiguous and Outlying Areas

Livingston's downtown has long been recognized as a place of opportunity as a commercial and cultural city and regional center. However, this position is challenged by the growth of the city and the realignment of SH 99. Reasserting the historic relationship of downtown to the growing community will be a matter of much public debate.

The size of Livingston provides its residents with relatively short trip times and distances. For example, the location of city offices, police, fire, and other governmental functions downtown serves to reduce trip duration. The proximity of commercial services in this area, however limited, reinforce downtown's role as a center for government and commerce. As a consequence of the realignment of SH 99, the relationship of downtown to the north side of Livingston has been altered. Notwithstanding the overpasses that connect the north to the south over SH 99, attention should be given in the General Plan to construct land use and circulation elements that minimize the bifurcation of the city. This also applies to the establishment of classified street plans in growth areas that minimize impact on existing and future residents.

The proposed Highway Commercial nodes at Winton Parkway and Hammatt Avenue represent opportunities to capture highway commerce and support existing commercial trips from outlying consumers.

2.3 POPULATION, ECONOMIC CONDITIONS AND FISCAL CONSIDERATIONS

This section analyzes the characteristics of the existing social and economic conditions and trends that effect the demand for residential, commercial, and industrial land use in Livingston. An overview assessment of Livingston's current demographic and economic condition allows projections to be adjusted based on various factors. These projections are used to forecast demand for dwelling units and acreage for residential, commercial and industrial uses for the 20 year period from 1999 to 2019, showing incremental development at five year intervals and projecting the quantitative and qualitative implications of each land usage. This discussion is intended to be used as a guide in the development of planning options and general plan policies.

2.3.1 Demographic and Real Estate Trends and Outlook

Population and Household Growth

According to the California Department of Finance's January 1997 population estimates, Livingston has a population of 10,490 residents and 2,412 households. This represents 44 percent growth from 1990, when the population census showed 7,317 residents and 1,656 households in Livingston. The annual growth rate between 1990 and 1997 was 5.3 percent, which was the highest rate of any of the cities in Merced County. But much of this growth occurred in the early 90's prior to the onset of the recession. As the recession concluded, other nearby communities such as Delhi emerged as the new growth leaders. Population growth in Livingston from 1996 to 1997 is estimated at only 50 persons, for a growth rate of less than one-half percent for that year.

Merced County as a whole is projected to accelerate its growth from what it has been during the 1990's. Although the County grew at an annual rate of 1.7 percent between 1990 and 1997, the State Department of Finance (DOF) projects the County to grow at an annual rate of 2.75 percent out to the year 2020. The rates within this period are expected to be about 2.7 percent between now and the year 2000, nearly 3 percent per year from 2000 to 2010, and then about 2.6 percent between 2010 and 2020. The projections for surrounding Counties are slightly lower than for Merced County. Between 1996 and 2020, Stanislaus County is projected to grow at a 2.7 percent rate annually, Madera County at 2.6 percent along with Fresno County, and 2.3 percent for San Joaquin County.

The State DOF projections are the most recent available, but two years ago the Merced County Association of Governments (MCAG) developed a set of even higher projections showing a 3.2 percent growth rate between 1995 and 2020. However, these projections showed a 4.4 percent rate between 1995 and 2000, while in fact the County has only grown at 1.7 percent for the last couple years.

The MCAG projections show Livingston experiencing a very high rate of growth through the year 2005, with the rate then declining gradually through the year 2020. Livingston is projected to have the highest growth rate of any of the cities in the County, but a number of the smaller unincorporated communities such as Beachwood/Franklin, Delhi, Hilmar, and Le Grand are projected to have even faster rates of growth.

Livingston, along with a number of the other communities in the region, have experienced population growth from commuters working in job centers outside the County. For the most part, this is a result of the eastward expansion of growth from the Bay Area, which has raised housing prices in communities in San Joaquin and Stanislaus County and created a need for some families with workers in these counties to look elsewhere for affordable housing. This trend slowed down considerably during the recession several years ago, but now the Bay Area is rapidly expanding again and Livingston will see increased housing demand gain in the near future.

In view of all of these factors, a population level of 10,550 in 1998, increasing to 22,440 by the year 2018, as seen in Table 2-2. The population projections are converted to numbers of households by using an average household size for each year in the projection. The household size in Livingston

is high compared to the County average but has been falling slightly in recent years. In 1997, it is estimated at 4.35 persons, down from 4.42 in 1990. The County average has also declined from 3.21 persons in 1990 to 3.19 persons in 1997. The Center for Continuing Study of the California Economy (CCSCE) tracks these trends and projects that the downward movement in household sizes will reverse itself again, and that by 2005 the County average household size will have climbed back to 3.32 persons. CCSCE is recognized as the leading source of projections of these kinds of demographic variables in California, and their overall growth assumptions have been incorporated into the projections for Livingston. Consequently, there is a continuing decline in Livingston household sizes until about 2003 and then a gradual increase. The rate of projected increase would result coincidentally in the year 2018 household size matching the figure for 1990 at 4.42, as seen in Table 2-2.

TABLE 2-2
Population and Household Projections

	1998	2003	2008	2013	2018
Population	10,600	12,600	15,761	19,695	22,440
Households	2,431	2,932	3,614	4,485	5,077
Persons per Households	4.34	4.30	4.36	4.39	4.42

The growth rates used in this analysis for Livingston are somewhat lower than the MCAG rates, shown in Table 2-3, to reflect the longer ramping up period the City and the region has experienced from the last recession. However, Livingston is still expected to be one of the fastest growing communities in the County over the next ten to fifteen years, trailing perhaps only Delhi. After 2013, growth in Livingston is projected to moderate back to the overall County average level.

TABLE 2-3
Rates of Growth

	1998-2003	2004-2008	2009-2013	2014-2018
ADE Projections				
Livingston	3.61%	4.58%	4.56%	2.64%
Merced County	2.78%	2.86%	2.94%	2.64%
MCAG Projections				
Livingston	5.88%	6.03%	4.42%	2.67%
Merced County	4.41%	3.75%	2.81%	2.94%

Source: ADE, Inc., Merced County Association of Governments

Real Estate Growth

Currently, about 75 percent of the housing units in Livingston are in the low density category. Attached single-family units are less than 4 percent of the housing stock while the 2-4 unit and the 5+ unit categories represent 7.4 percent and 13.5 percent of the total units, respectively. These latter two categories have increased their percentage slightly since 1990, but this has come mostly at the expense of the attached single family category rather than the low density single family units, as shown in Table 2-4.

TABLE 2-4
Housing Types in Livingston

Unit Type	1990	%	1997	%
Detached Single Family	1265	75.3%	1884	75.4%
Attached Single Family	81	4.8%	93	3.7%
2 or 4 Units	109	6.5%	184	7.4%
5 or More Units	224	13.3%	338	13.5%

Source: 1990 Census, California State Department of Finance, 1997.

Based on the household projections plus a 5 percent vacancy rate, the total number of dwelling units is projected to increase from 2,552 units in 1998 to 5,331 units in 2018, as seen in Table 2-5, along with projections of density and acreage demand.

TABLE 2-5
Residential Land Use Demand Projections

	1998	2003	2008	2013	2018
Dwelling Units					
<i>Low Density</i>	1,914	2,309	2,846	3,532	3,998
<i>Medium Density</i>	97	101	105	109	113
<i>High Density</i>	542	669	843	1,069	1,220
Total Dwelling Units	2,553	3,079	3,794	4,710	5,331
Acreage Demand (Total)					
<i>Low Density</i>	348.8	420.8	518.5	643.6	728.5
<i>Medium Density</i>	8.1	8.4	8.7	9.0	9.4
<i>High Density</i>	31.7	39.1	49.4	62.5	71.4
Acreage Demand (Growth)					
<i>Low Density</i>		71.9	97.7	125.1	84.9
<i>Medium Density</i>		0.3	0.3	0.3	0.3
<i>High Density</i>		7.5	10.2	13.2	8.9
Acreage Demand (Growth From 1998)					
<i>Low Density</i>		71.9	169.7	294.8	379.6
<i>Medium Density</i>		0.3	0.7	1.0	1.3
<i>High Density</i>		7.5	17.7	30.9	39.7
Acreage Demand (Percent Growth From 1998)					
<i>Low Density</i>		20.6%	48.6%	84.5%	108.8%
<i>Medium Density</i>		4.1%	8.2%	12.3%	16.5%
<i>High Density</i>		23.6%	55.9%	97.4%	125.4%

SOURCE: ADE, Inc.

The distribution of units by density is projected to remain nearly the same as the current distribution, with slower growth in the attached single family category compensated by slightly higher growth in the higher density categories. This assumption is strongly affected by the general plan and zoning policies adopted by the City, so the actual land use plan and housing type distribution may well be different than this when the general plan update process is complete

The acreage demand for the housing units is estimated on the basis of the current average density in each residential category. Comparing the unit counts with the total acreage for each residential land use category, the average densities are approximately 5 units per acre in the low density category, 12 units per acre in the medium density category and 17 units per acre in the high density category. Again, these figures could change as a result of the general plan update, but they provide the basis for the preliminary estimates of land demand for residential uses.

Economic Trends

Merced County had in 1996 a total employment of 47,390¹, an increase of 3,132 since 1991. This represents a 7% percent increase for the period or an annual growth rate of about 1.38 percent. This may be contrasted to the state, which had only a 3% increase from 1991 to 1996, and an annual growth rate of only 0.6%. (Table 2-6). The County's performance is indicative of its potential comparative economic advantages versus other regions of the state. The substantially lower labor costs in the County could explain to a large extent this performance. In 1996, the average wage for the County was 63 percent of the average wage for the state (Table 2-7).

On the other hand, the agricultural sector's health and importance for the County seems to be less the result of lower labor costs than the result of economies of scale and other inherent comparative advantages. The average agricultural sector wage in the County was 98.4% percent of the state's average for the same sector (Table 2-7), up from 95.5% in 1991.

County employment in the manufacturing sector increased during the period by over 15 percent, while the state as whole lost close to 9 percent of its employment in this sector during the same period (Table 2-6). Again, the lower manufacturing wage in Merced County, \$26,085, which is only about 65 percent of the corresponding state's average of \$39,815, could have contributed substantially to the employment growth in the County.

Employment generated by retail trade in the County also outperformed the state (Chart 2-1). In the 1992-1996 period there was a 11 percent increase, while the state figure was only 2.4 percent. This differential performance cannot be accounted for by a higher population in Merced County. During the period, the County's population increase of 8.2 percent was only slightly higher than the state's 6.4 percent.

¹ MIG ES202 County Files. The figure does not include self-employed persons, and Federal, State and Local government employees.

TABLE 2-6
Employment from 1991 to 1996
Merced County vs. California

	Employment 1991	Employment 1996	% Change 1991 to 1996	Annual Growth Rate	Employment Distribution, 1996
MERCED COUNTY INDUSTRIES					
Total	44,258	47,390	7.1%	1.38%	100%
AGRICULTURE	10,369	11,417	10.1%	1.94%	24.1%
MINING	96	18	-81.3%	-28.45%	0.0%
CONSTRUCTION	1,549	1,537	-0.8%	-0.16%	3.2%
MANUFACTURING	9,055	10,432	15.2%	2.87%	22.0%
TRANSP. & UTILITIES	2,229	1,890	-15.2%	-3.25%	4.0%
WHOLESALE TRADE	2,052	1,652	-19.5%	-4.24%	3.5%
RETAIL TRADE	9,186	10,177	10.8%	2.07%	21.5%
F.I.R.E.	2,427	2,204	-9.2%	-1.91%	4.7%
SERVICES	7,295	8,063	10.5%	2.02%	17.0%
	Employment 1991	Employment 1996	% Change 1991 to 1996	Annual Growth Rate	Employment Distribution, 1996
CALIFORNIA INDUSTRIES					
Total	10,738,600	11,077,100	3.2%	0.62%	100%
AGRICULTURE	426,083	495,608	16.3%	3.07%	4.5%
MINING	38,739	28,780	-25.7%	-5.77%	0.3%
CONSTRUCTION	546,165	504,237	-7.7%	-1.58%	4.6%
MANUFACTURING	2,012,129	1,836,942	-8.7%	-1.81%	16.6%
TRANSPORTATION & PUBLIC UTILITIES	599,995	625,593	4.3%	0.84%	5.6%
WHOLESALE TRADE	735,936	746,093	1.4%	0.27%	6.7%
RETAIL TRADE	2,173,551	2,226,190	2.4%	0.48%	20.1%
FINANCE, INSURANCE, & REAL ESTATE	820,650	732,276	-10.8%	-2.25%	6.6%
SERVICES	3,335,811	3,845,850	15.3%	2.89%	34.7%

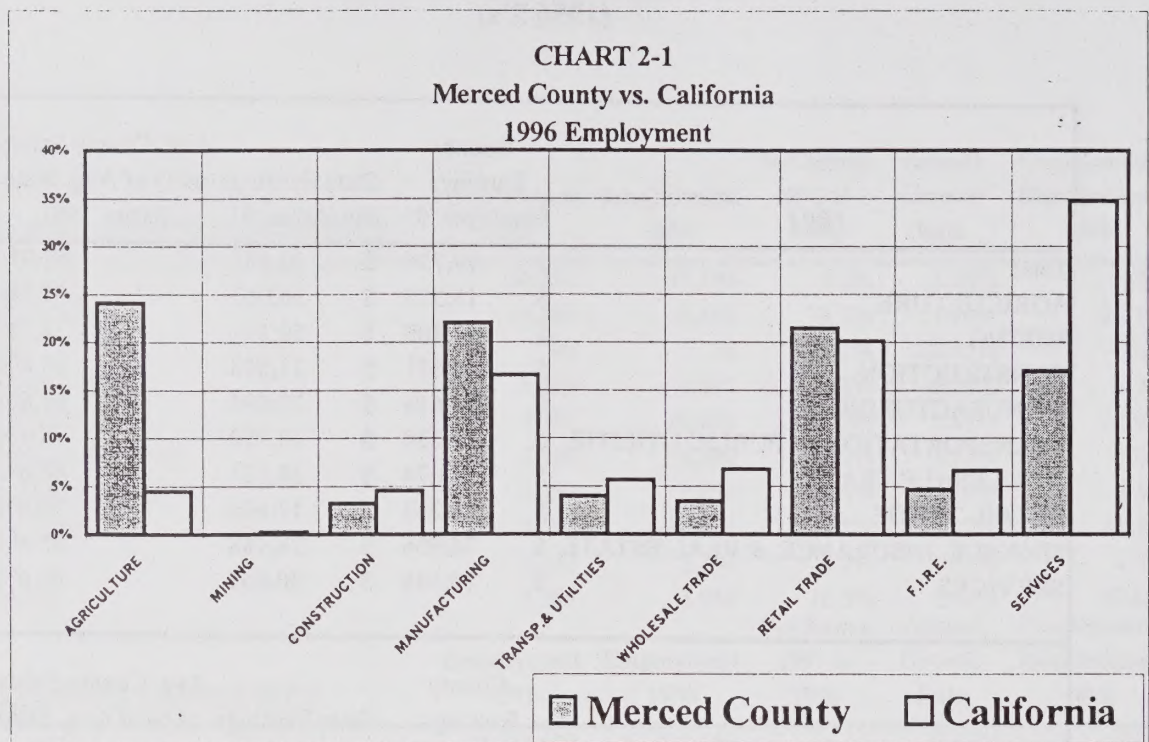
NOTE: EMPLOYMENT FIGURES EXCLUDE SELF EMPLOYED PERSONS AND ALL STATE, FEDERAL AND LOCAL GOVERNMENT EMPLOYEES.

TABLE 2-7
Payroll in Merced County and California
(1996 \$'s)

<i>1991</i>	County Earnings Employee '91	State Earnings Employee '91	Avg. County Salary as % of Avg. State Salary 1991
Total	\$ 19,734	\$ 30,881	63.9%
AGRICULTURE	\$ 15,333	\$ 16,063	95.5%
MINING	\$ 17,409	\$ 50,151	34.7%
CONSTRUCTION	\$ 22,671	\$ 34,688	65.4%
MANUFACTURING	\$ 24,618	\$ 38,694	63.6%
TRANSPORTATION & PUBLIC UTILITIE	\$ 29,230	\$ 38,750	75.4%
WHOLESALE TRADE	\$ 25,674	\$ 38,525	66.6%
RETAIL TRADE	\$ 14,233	\$ 17,833	79.8%
FINANCE, INSURANCE, & REAL ESTATE	\$ 24,956	\$ 38,188	65.4%
SERVICES	\$ 19,949	\$ 30,863	64.6%

<i>1996</i>	County Earnings Employee '96	State Earnings Employee '96	Avg. County Salary as % of Avg. State Salary 1996
Total	\$ 19,602	\$ 31,185	62.9%
AGRICULTURE	\$ 14,621	\$ 14,864	98.4%
MINING	\$ 26,756	\$ 54,222	49.3%
CONSTRUCTION	\$ 21,009	\$ 32,636	64.4%
MANUFACTURING	\$ 26,085	\$ 39,815	65.5%
TRANSPORTATION & PUBLIC UTILITIE	\$ 29,726	\$ 38,520	77.2%
WHOLESALE TRADE	\$ 25,801	\$ 39,433	65.4%
RETAIL TRADE	\$ 13,819	\$ 17,276	80.0%
FINANCE, INSURANCE, & REAL ESTATE	\$ 26,523	\$ 43,303	61.3%
SERVICES	\$ 19,747	\$ 31,800	62.1%

SOURCE: ADE, Data from MIG ES202 County Files



During the period, the County's population increase of 8.2 percent was only slightly higher than the state's 6.4 percent.

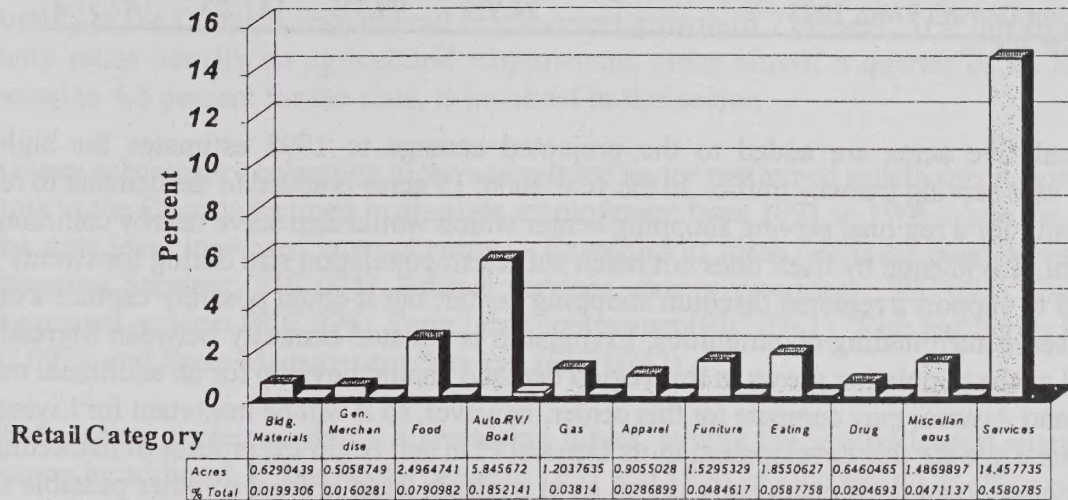
The County sectors that did not perform particularly well in generating employment for the County were transportation and public utilities, and wholesale trade. Employment in transportation and public utilities decreased by 15.2 percent or 339 employees for the period, while the second registered a 19.5 percent or 400 jobs decline. In contrast, the state posted a 4.3 and 1.4 percent respective increases for the period. Finance, insurance, and real estate employment also declined by 9 percent in the County, similar to the state's 11% decline.

In the general category of services, employment in the County rose by about 11 percent, while the state figure was 15 percent.

Retail Trends and Outlook

Using a retail demand model based on consumer spending patterns, aggregate income, and sales per square foot figures, ADE estimated the 1996 aggregate demand per retail type of Livingston households, and estimated the acreage of commercial land that would be needed to meet that demand. The result of the demand model is pictured in Chart 2-2.

CHART 2-2
Supportable Acreage by 1996 Retail Demand



SOURCE: ADE, Inc.

The demand for retail stores and local services in Livingston could have supported 31.5 acres in 1996, and by 1998 that demand has increased to support nearly 33 acres of commercial development. The land use inventory indicates that the City has about 28 acres developed at present time, some of which is not performing exceptionally well. The difference between demand and supply can be attributed to a variety of factors but is likely mostly due to competition from larger commercial centers in Merced and Turlock. Many workers residing in Livingston work out of town and do some of their shopping where they work. A number of other residents in the community are lower income and while they shop locally due to their lack of mobility, have lower disposable incomes and therefore register lower sales than do other segments of the population. Finally, Livingston is underserved in several categories that often are provided in regional shopping centers which are more difficult for smaller communities to attract. These include furniture and home furnishing, apparel, and auto/RV sales, among others.

Based on the growth in population and households discussed earlier, as well as growth in disposable income in the community, the projected the acreage of land needed for commercial use from 1998 to 2018, shown in Table 2-8. Demand for commercial land is estimated primarily on the basis of projected changes in purchasing power of the City's population.

TABLE 2-8
Commercial Land Use Demand Projections

	1998	2003	2008	2013	2018
Acres Needed	37.8	47.2	75.5	93.5	108.7
Growth in Acres Needed		9.4	28.3	18.0	15.3
Growth From 1998		9.4	37.7	55.7	70.9
Percent Growth From 1998		24.9%	99.7%	147.2%	187.5%

SOURCE: ADE, Inc.

An additional five acres are added to the projected acreage to 1998 estimates for highway commercial uses serving freeway traffic. In the year 2008, 15 acres is added to the demand to reflect the opportunity for a regional serving shopping center which would also serve nearby communities such as Delhi. Livingston by itself does not reach sufficient population size during the twenty year study period to support a regional discount shopping center, but it could possibly capture a center that would serve surrounding communities. Livingston is situated centrally between Merced and Turlock and as the population grows in this region demand should develop for an additional center. Both Delhi and Atwater may compete for this center, however, so it will be important for Livingston to incorporate a site for this development in its General Plan and begin the process of marketing the concept to commercial developers early on, so as to position itself in front of other possible sites.

2.3.2 Industrial Trends and Outlook

Livingston Industrial Land Use Projections and Implications

Merced County has enjoyed a relatively strong rate of growth in industrial development. Between 1970 and 1990, manufacturing employment grew at a 7.2 percent annual rate while wholesale distribution employment grew 4.9 percent per year. This growth slowed considerably during the early 1990s, but still remained positive while the state as a whole actually lost manufacturing employment. MCAG estimates that growth in manufacturing between 1990 and 1995 occurred at a 3.2 percent annual rate, with wholesale distribution posting a 4.5 percent rate. MCAG projects that total industrial growth will continue at about 3.5 to 4 percent per year through 2015. Projections for Livingston lag the County growth rate slightly in the early years, but shows a steady increase toward 4 percent per year growth by 2018. (Table 2-9)

TABLE 2-9
Industrial Land Use Demand Projections

	1998	2003	2008	2013	2018
Acres Needed	109.7	127.4	151.8	183.6	223.4
Growth in Acres Needed	--	17.7	24.4	31.8	39.8
Growth From 1998	--	17.7	42.1	73.9	113.7
Percent Growth From 1998	--	16.1%	38.4%	67.4%	103.6%

SOURCE: ADE, Inc.

Merced County Outlook

The most important economic sector of Merced County's growing economic base in terms of employment is agriculture, as it is shown in Table 2-6. By 1996 there were 11,390 people, or more than 24 percent of the County's job base, employed directly in this sector. From 1991 to 1996 agricultural employment in the County expanded by 1,048 employees or 10 percent. This compares favorably to the County's own overall employment growth of 7 percent. It is obvious that Merced County relies heavily on agricultural employment, since almost a quarter of its labor base, as opposed to 4.5 percent for the state, is involved in this sector.

Not every subcategory belonging to the agricultural sector performed satisfactorily, however. A few sectors in the County declined in absolute employment from 1991 to 1996 while the same sectors at the state level increased in employment. Examples of these declining base industries are Soil Preparation Services (SIC 071), Animal services, except veterinary (SIC 075), Farm labor and management services (SIC 076), Farm labor contractors, (SIC 0761), Fish hatcheries and preserves (SIC 092), and Farm Management Services (SIC 0762).

Manufacturing, however, shows a promising future, having the second largest share in the local economy by adding 1,377 new jobs between 1991 and 1996 and increasing its employment by 15.2 percent during the period. This increase is the highest for any particular economic sector in the County, and it becomes more important if one takes into account that during that same period the state's employment in manufacturing declined by a substantial 8.7 percent. Total County employment in the manufacturing sector was by 1996 10,432 employees or 22 percent of the County's labor base, in contrast to 16.6 percent for the state. For the 1991 - 1996 period, manufacturing employment grew yearly by 0.93 percent faster than agricultural employment (Table 2-6), and the manufacturing sector could become in the future the predominant employer in the County. Such a development could be beneficial because of higher wages in the manufacturing sector, as compared to agriculture. In 1996 the average manufacturing wage, at \$26,085 was 78 percent higher than the corresponding agricultural average of \$14,621 (Table 2-7). Higher per capita income translates into higher tax revenue for the County, it increases the potential for significant infrastructure investment, and through the multiplier effect has a significant impact on creating new jobs for the local economy.

A benefit of the strong agricultural sector in the County has been the establishment and growth in the County of various food processing industries which use as inputs the agricultural output. These include processing plants for dairy products, canned, dry and frozen fruits and vegetables, and meat packing plants. For example, as Table 2-10 shows, employment in plants that produce preserved fruits and vegetables increased 112% during the 1992-1996 period, increasing from 1,092 to 2,310 employees at an average annual growth rate of 16%. At the state level, during the five-year period these sectors produced an 11 percent decrease.

TABLE 2-10
Growing Economic Industries in Merced County

Merced County					California				
SIC	Description	Employment 1991	Employment 1996	Annual Growth Rate % Change Employment, 1991 to 1996	Employment 1991	Employment- 1996	Annual Growth Rate % Change Employment, 1991 to 1996		
AGRICULTURAL									
0721	Crop planting, cultivating, and protecting	198	233	3%	18%	5,257	5,464	1%	4%
0722	Crop harvesting, primarily by machine	159	391	20%	146%	8,722	8,516	0%	-2%
0724	Cotton ginning	29	45	9%	55%	1,036	1,052	0%	2%
0740	Veterinary services	87	148	11%	70%	16,414	18,623	3%	13%
0751	Livestock services, except veterinary	84	62	-6%	-26%	868	602	-7%	-31%
MANUFACTURING									
Dairy products									
2022	Cheese, natural and processed	316	415	6%	31%	2,545	2,724	1%	7%
2023	Dry, condensed, evaporated products	65	138	16%	112%	883	697	-5%	-21%
Preserved fruits and vegetables									
2033	Canned fruits and vegetables	1,092	2,310	16%	112%	39,490	35,143	-2%	-11%
2034	Dehydrated fruits, vegetables, soups	295	668	18%	126%	23,587	19,518	-4%	-17%
2037	Frozen fruits and vegetables	45	149	27%	231%	9,344	8,924	-1%	-4%
Fats and oils									
2074	Cottonseed oil mills	752	1,493	15%	99%	6,559	6,701	0%	2%
Beverages									
2086	Bottled and canned soft drinks	30	92	25%	207%	585	566	-1%	-3%
Paper and Allied Products									
2653	Corrugated and solid fiber boxes	77	179	18%	132%	9,164	9,614	1%	5%
2676	Sanitary paper products	150	190	5%	27%	13,125	13,594	1%	4%
275	Commercial Printing	8	10	5%	25%	1,747	1,390	-4%	-20%
2759	Commercial printing, nec	202	811	32%	301%	64,058	58,301	-2%	-9%
Chemicals and Allied Products									
2873	Nitrogenous fertilizers	33	791	89%	2297%	21,047	21,063	0%	0%
2875	Fertilizers, mixing only	212	350	11%	65%	1,111	1,022	-2%	-8%
METAL PRODUCTS									
3411	Metal cans	212	350	11%	65%	784	1,103	7%	41%
3412	Metal barrels, drums, and pails	3	82	94%	2633%	5,316	4,721	-2%	-11%
3446	Architectural metal work	44	95	17%	116%	957	642	-8%	-33%
3451	Screw machine products	4	158	109%	3850%	3,674	3,141	-3%	-15%
3713	Truck and bus bodies	21	75	29%	257%	3,358	3,590	1%	7%
3732	Boat building and repairing	16	25	9%	56%	2,301	2,120	-2%	-8%
WHOLESALE TRADE									
5083	Farm and garden machinery	96	236	20%	146%	3,516	3,045	-3%	-13%
		181	222	4%	23%	7,991	7,755	-1%	-3%

Source: ADE, Inc., Data from MIG ES202 County Files

Opportunities for Diversification

While recognizing that food processing is a major component of industrial development in the County, Livingston does have limitations in its ability to support industrial development. Because the existing wastewater treatment facilities in Livingston are not adequate to serve additional major food processing plants, it would be beneficial to look at other industries which have also showed strong growth in recent years. Particular industries within the manufacturing sector that experienced substantial growth besides food processing are various sectors of commercial printing and metal products (See Table 2-10). Employment in commercial printing increased more than fourfold during the period, from 202 employees in 1991 to 811 in 1996. Other industries boosting employment were metal cans and shipping containers, paperboard containers and boxes, screw machine products, electronic components, medical instruments and other fabricated metal products. All of these industries have experienced double-digit growth through 1996, the latest year such detailed data are available, in spite of declining or a significantly smaller growth in employment on the state level. Similarly, machinery equipment and supplies (SIC 508), a Wholesale Trade sector and part of the growing economic base for the County, also experienced growth while the state declined. Livingston already has firms in some of these industries, and its location on Highway 99 gives it a good opportunity to attract further industrial development.

While the agricultural and manufacturing sectors comprise the main component of the County's growing economic base, certain other industries show a potential for a promising future. Table 2-11 lists a group of emerging industries in the County, business sectors that show a high growth rate when compared to the corresponding state sector performance (i.e., the relative growth rate is positive), but whose share in the local economy is small compared to the share of that same sector in the state economy (i.e., the degree of concentration is less than one.) A promising fledgling sector is manufacturing electronic components, which had a 35 percent increase in employment from 1991 to 1996 and an annual growth rate of 6 percent, while the state had a 5 percent decline over the five year period, as shown in Table 2-11. Various business services also grew during this time period, suggesting that business in the area is on a promising upswing.

TABLE 2-11
Emerging Industries in Merced County

		Merced County				California			
SIC	Description	Employment-1991	Employment-1996	Annual Growth Rate	% Change Employment, '91-'96	Employment-1991	Employment-1996	Annual Growth Rate	% Change Employment, '91-'96
Manufacturing									
2439	Structural wood members, nec	7	12	11%	71%	2478	2852	3%	15%
2511	Wood household furniture	5	8	10%	60%	10595	11455	2%	8%
2541	Wood partitions and fixtures	5	14	23%	180%	5225	5281	0%	1%
3599	Industrial machinery, nec	1	17	76%	1600%	31615	35130	2%	11%
3679	Electronic components, nec	49	66	6%	35%	32998	31245	-1%	-5%
Business Services									
7311	Advertising agencies	10	19	14%	90%	22857	22466	0%	-2%
7342	Disinfecting & pest control services	40	66	11%	65%	10949	15503	7%	42%
7381	Detective & armored car services	30	105	28%	250%	72681	89685	4%	23%
7382	Security systems services	9	19	16%	111%	5271	7951	9%	51%

Source: ADE, data from MIG ES202 County Files

Note: Emerging industries are defined as the industries whose job growth between 1991 and 1996 outperformed the rest of the state, but had a concentration of employment lower than the state as whole.

Developing Buyer/Seller Relationships

In order to better understand the potential for developing new or expanded businesses in the County, it is useful to investigate the trade relationships between County buyers and out-of-County suppliers and to identify leakages from the County economy. There are 153 industries for which the County is a net importer. The list was created by evaluating the input requirements for all the industries analyzed in the previous section of the report using an input-output model. By comparing the leakages with the typical production levels of one production facility in each industry, it is possible to determine whether there is enough demand from businesses in the County for a particular industry to support the creation of an additional establishment in the County.

The following list shows the industries whose County-wide demand is higher than the average sales per establishment and therefore are potential candidates for establishing a production facility within the County. There are eight industries that fulfill the above criterion:

- ▶ Commercial Printing (SIC 2750)
- ▶ Typesetting (SIC 2791)
- ▶ Plate Making (SIC 2796)
- ▶ Miscellaneous Plastics Products (SIC 3080)
- ▶ Metal Foil and Leaf (SIC 3497)
- ▶ Fabricated Metal Products, n.e.c. (SIC 3499)
- ▶ Industrial Machines, n.e.c. (SIC 3599)
- ▶ Motor Vehicle Parts and Accessories (SIC 3714)

In addition, two more industries, Coated & Laminated Paper (SIC 2672) and Plating and Polishing Operations (SIC 3471), have leakages that exceed 80 percent of the average sale per establishment; similarly, Printing Ink (SIC 2893) and Hardware (SIC 3429) have leakages that exceed 58 percent of the state average sales per establishment. These last four industries fall also within the feasible range of supporting an additional production facility in the County. The input-output analysis provides a guide for evaluating potential business development opportunities which can be followed up with further research to confirm the specific buyer/supplier relationships among Merced County businesses, and the existence of competing plants elsewhere in the region.

2.3.3 Employment and Commuting Patterns

The countywide economic picture could bring perspective and new opportunities to Livingston. In order to determine what type industry could be a benefit to Livingston residents, the intent of this section is to give a clearer picture of the employment and commuting patterns of the residents.

As of the 1990 Census, over half of Livingston's work force had less than a ninth grade education, as compared to only a fifth of the same population in the County. Table 2-12 shows that about 30% of Livingston's 25-year-and-older population had at least a high school diploma, but only 5% had been to college at least four years. All of these statistics are lower than the County average.

TABLE 2-12
Educational Attainment
City of Livingston and Merced County

		% Change			
City of Livingston	1980	%	1990	%	'80-'90
25 years and older	2324		3505		51%
Less than 9th Grade	1143	49%	1805	51%	58%
9th to 12th grade, no diplo	373	16%	608	17%	63%
High School graduate	380	16%	427	12%	12%
Some college	259	11%	481	14%	86%
Four years college or more	169	7%	184	5%	9%
		% Change			
Merced County	1980	%	1990	%	'80-'90
25 years and older	71262		98819		39%
Less than 9th Grade	18194	26%	20880	21%	15%
9th to 12th grade, no diplo	10049	14%	15545	16%	55%
High School graduate	22220	31%	22806	23%	3%
Some college	13337	19%	27715	28%	108%
Four years college or more	7462	10%	11873	12%	59%

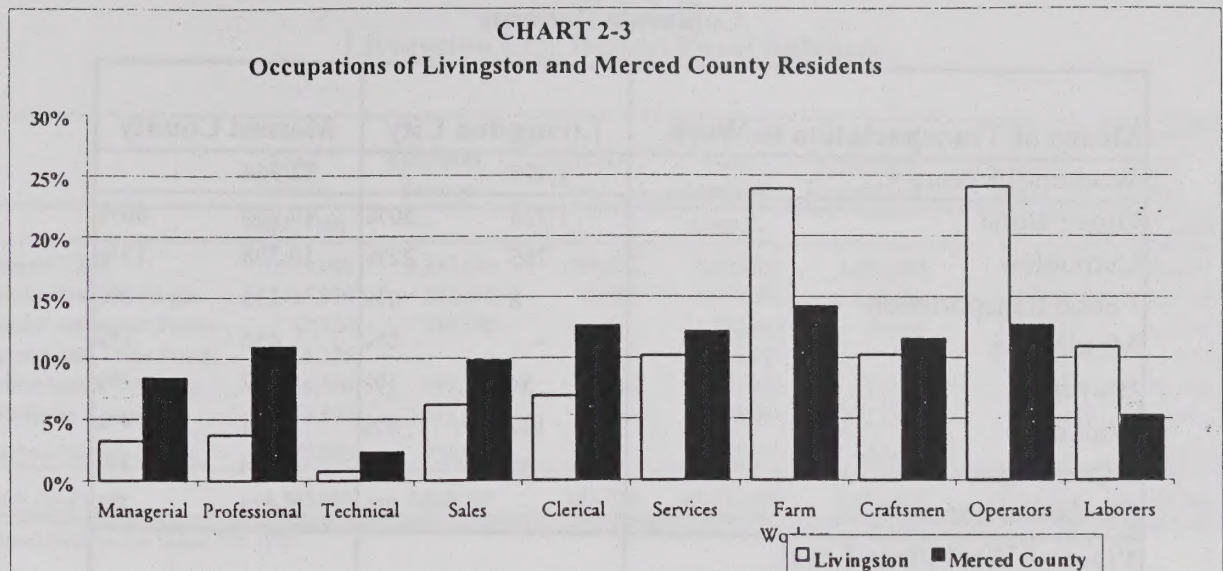
SOURCE: ADE, Inc.

This level of education is reflected in the types of positions attained by the majority of Livingston residents. Table 2-13 and Chart 2-3 show that only 7% of Livingston's labor force in 1990 was in a managerial, executive, or professional role, in contrast to 19% of Merced County's labor force. Seventy percent (70%) of Livingston's labor force were farm workers, craftsmen, operators, or laborers, in contrast to the County's 44%.

TABLE 2-13
Labor Force by Occupation
City of Livingston and Merced County

Livingston City Employment					
Labor Force by Occupation					80-'90
	1980	%	1990	%	Percent Change
Managerial/Executive	58	3%	89	3%	53%
Professional	90	5%	104	4%	16%
Technical	15	1%	21	1%	40%
Sales	92	5%	173	6%	88%
Clerical	168	9%	192	7%	14%
Services	196	10%	284	10%	45%
Farm Workers	181	10%	665	24%	267%
Craftsmen	320	17%	285	10%	-11%
Operators	461	25%	670	24%	45%
Laborers	295	16%	303	11%	3%
Total Labor Force (16yrs+)	1,876		2,786		49%
Merced County Employment					
Labor Force by Occupation					80-'90
	1980	%	1990	%	Percent Change
Managerial/Executive	3,658	7%	5,566	8%	52%
Professional	4,038	8%	7,233	11%	79%
Technical	1,130	2%	1,542	2%	36%
Sales	4,962	10%	6,495	10%	31%
Clerical	6,874	14%	8,365	13%	22%
Services	6,873	14%	8,041	12%	17%
Farm Workers	7,458	15%	9,405	14%	26%
Craftsmen	6,131	12%	7,625	12%	24%
Operators	5,529	11%	8,377	13%	52%
Laborers	2,578	5%	3,467	5%	34%
Total Labor Force (16yrs+)	49,231		66,116		34%

SOURCE: ADE, Inc., 1990 Census



The top employers in Livingston, listed in Table 2-14, seem like they may offer many of the agricultural and manufacturing jobs worked by Livingston residents. However, only 45% of the 16 and older labor force work within the city of Livingston; over half travel outside the city to work, with an average commute time of 13 minutes. (Table 2-15)

TABLE 2-14
Livingston's Top Employers

Employer	SIC	Industry	Employees
Foster Farms	5144-9904	Poultry live, hatchery	3900
Gallo E& J Winery	5821-0102	Wine Cellar	250-499
Rogers Foods	2034-0000	Dried & Dehydrated	250-499
Angelaki's Vineyards	0139-0202	Sweet Potato Farm	50-99
Campus Park Elementary School	8211-0000	School	50-99
Grace Nursing Home Inc.	8051-9901	Convalescent Home	50-99
Livingston High School	8211-9903	High School	50-99
Livingston Middle School	9411-0000	Administration	50-99
Yamato Colony Elementary School	8211-0303	Elementary School	50-99

SOURCE: ADE, Inc., Dunn and Bradstreet, 1st Qtr., 1998

TABLE 2-15
Commute Patterns

Means of Transportation to Work	Livingston City		Merced County	
Workers 16 years +	3,479		82,968	
Drove alone	1,730	50%	49,986	60%
Carpooled	765	22%	10,708	13%
Public transportation	8	0%	235	0%
Motorcycle	-	0%	456	1%
Bicycle	34	1%	732	1%
Walked	132	4%	3,411	4%
Other means	37	1%	734	1%
Worked at home	-	0%	2,435	3%
Place of Workplace Level				
Worked in Livingston	1,208	45%	23,262	48%
Worked outside Livingston	1,498	55%	25,138	52%
Average Commute Time (Minutes)	13		13.5	

SOURCE: ADE, Inc., 1990 Census

2.3.4 Livingston City Budget

The City budget consists of a number of funds as shown in Table 2-16. The largest fund in terms of its annual expenditures is the general fund, which pays the operating costs for most of the basic city services such as police, fire protection, park maintenance and recreation services. Revenues for this fund come from general taxes such as property and sales taxes and a variety of permit and license fees charged by the City. The general fund is discussed in more detail below, but it is a significant area in the budget where the City has some discretion in terms of allocating expenditures to various services. On the other hand, the general fund is also the most sensitive to the character of development in the community, which affects the strength of the tax base upon which the general fund depends for its revenue.

Enterprise funds as a group are the next largest in the budget. These funds pay for water and sewer services based on fees collected from households and businesses receiving those services. Enterprise funds are designed to pay for themselves through service charges and therefore are not as sensitive as the general fund to economic ups and downs.

The special revenue funds are mainly state funds received for street maintenance. The Redevelopment Agency collects tax increment funds which are used for economic development and low-income housing assistance projects. Special Assessment Funds reflect maintenance districts that have been established to fund local improvements and which are largely self-supporting. The internal service funds pay for City vehicle purchase and maintenance.

TABLE 2-16
Livingston City Budget Fund Balances

	Estimated Fund Balance	Estimated Revenue	Transfers In	Estimated Fund Available	Estimated Expenditures	Transfers Out	Projected Fund Balance
	July 1, 1998			Fy 98-99			June 30, 1999
General Fund	1,979,000	2,287,165	786,325	5,052,490	3,181,396	134,310	1,736,784
Special Revenue Funds	425,930	543,670	50,000	1,019,600	427,735	398,750	193,115
Special Assessment Funds	(2,700)	184,745	-	182,045	31,480	153,265	(2,700)
Agency And Trust Funds	6,125	-	-	6,125	-	-	6,125
Redevelopment Agency	136,500	195,200	26,000	357,700	51,500	176,000	130,200
Enterprise Funds	4,173,800	2,531,235	-	6,705,035	2,713,495	-	3,991,540
Internal Service Funds	27,000	126,910	-	153,910	166,035	-	(12,125)
Total All Funds	6,745,655	5,868,925	862,325	13,476,905	6,571,641	862,325	6,042,939

Source: Livingston City Budget 1998-1999

Table 2-17 details the revenues and expenditures within the general fund. The general fund budget is slightly out of balance, but as noted in the City Manager's budget message, this is partly explainable by the one-time expense to update the general plan and is not a major cause for concern. Aside from transfers from the other funds, shown in Table 2-16, the largest category of revenues is license and permit fees. Most of this revenue comes from franchise fees paid by utility providers, but the category also includes business license fees and building fees paid by new development. The second largest source of revenue is the vehicle in lieu tax, which is actually a state subvention to cities. The state is currently considering significantly reducing this revenue. If this occurs without corresponding reimbursement for cities, it will have a major impact on Livingston.

It is significant that the property tax and sales tax in Livingston rank below the vehicle in lieu tax, indicating that both the property tax base and the level of retail sales are relatively low in the community. The property tax has limited revenue potential due to restrictions created by Proposition 13, but many California cities have focused on developing retail opportunities as a means of increasing local sales tax revenues. For many cities, the sales tax is a stronger source of revenues than is the property tax. In Livingston, however, this is not the case.

Overall, the City is in a sound financial position, with adequate fund balances throughout the budget. This is mainly a reflection of prudent spending policies rather than a generous tax base in the community.

TABLE 2-17
General Fund Revenues and Expenditures

Revenues	Estimated 1998-99
Property Tax	\$ 372,135
Sales & Use Tax	\$ 236,535
Transient Tax	\$ 2,100
Other Taxes	\$ 85,270
Licenses and Permits	\$ 502,640
Fines	\$ 62,500
Investment Revenues	\$ 81,660
Service / Reimbursement Revenue	\$ 288,910
Vehicle in Lieu Tax	\$ 435,000
Other Revenues	\$ 27,615
Operating Transfers	\$ 786,325
Total General Fund Revenue	\$ 2,880,690
Expenditures	
City Council	\$ 95,165
City Manager	\$ 188,515
City Clerk	\$ 9,135
City Attorney	\$ 42,535
City Treasurer	\$ 795
Admin. Services	\$ 364,160
Police Dept.	\$ 1,289,570
Recreation	\$ 73,145
Parks	\$ 145,245
Fire	\$ 50,745
Streets	\$ 370,330
Public Works	\$ 77,855
Planning	\$ 132,715
Building	\$ 59,335
Total Expenses	\$ 2,899,245

Source: Livingston City Budget 1998-1999

2.4 TRANSPORTATION AND CIRCULATION

2.4.1 Introduction

The component of the General Plan that deals most directly with circulation and transportation is the Circulation Element. It describes in a single document the policies, plans and goals that are relevant to the community's current and future circulation requirements. The Circulation Element

is also designed to support the goals of the community as they relate to the planned land uses. This Element will set forth the strategies and policies that will maintain the level of service of the City's streets and highways, transit, aviation, bicycle/pedestrian facilities, truck routes and transportation system management strategies.

The objective of the Livingston Circulation Element is to develop an overall plan or "blueprint" for the future transportation needs and to maintain and improve the overall circulation system in and around Livingston to a level of service deemed acceptable by the community. The Element is designed to be compatible with the various elements of the General Plan and responds to the land use, open space, and conservation goals of the City.

The legal authority for the Livingston Circulation Element is outlined in the California Government Code Section 65302 (b), which states a general plan shall include "...a circulation element consisting of the extent and general location of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element of the plan."

Circulation elements have been a mandatory element of the local General Plan since 1955. The Element is basically a plan to create an infrastructure so that there will be efficient circulation of people, goods, communications, etc. In recent years, circulation elements have seen added emphasis placed on the direct correlation with the community's land use element, the fundability of the proposed projects outlined in this document, other modes of transportation and the adequacy of the adopted policies to carry out the intent of the element.

2.4.2 Purpose

The intent of this section is outline the existing transportation conditions within the City of Livingston and to address the current and future needs that will have an impact on the overall movement of people and goods throughout the City. Identifying the needs will assist in planning an efficient circulation system that will aid in improving the community as well as the safeguarding the environment.

2.4.3 Study Area

The City of Livingston is located in the northern section of Merced County along the Highway 99 corridor. As noted, Washington Boulevard and the Merced River to the west, Eucalyptus Avenue to the north, Sultana Drive to the East, and Magnolia Avenue to the south border the Study Area for the General Plan. For the purposes of this section, the boundaries are Robin Avenue to the west, Olive Avenue to the north, Peach Avenue to the south, and Dwight Way to the east. Highway 99 was reconstructed as a four-lane freeway in 1996. It passes through the middle of town running northwest to southeast. The City now has four major entrances. The new entrances are:

- ▶ A highway interchange at Winton Parkway. This interchange is in the northwestern portion of the City.
- ▶ A highway interchange at Hammatt Avenue. This interchange is in the southeast portion of the City.
- ▶ Livingston-Cressey Road from the north.
- ▶ Lincoln Boulevard/Main Street from the south.

Since the completion of SH 99, the City's through traffic has three overpasses to connect the north side of town with the south side. The overpasses include, Winton Parkway, Main Street bridge, and Hammatt Avenue. These streets can be found on Figure 2-1.

2.4.4 Streets and Highways

This section deals with the automobile and truck transportation as the primary sources for moving people and commodities in and through the City of Livingston. A complete description of the street and highway system is included in this section. Also included is an analysis of the operating condition of the current circulation system, along with identification of traffic problems within the community. Other alternative transportation modes including transit, aviation, rail, bicycle and pedestrian, truck, transportation management systems, and goods movement are discussed.

Functional Classification

A community's street system is composed of a wide range of facilities. Street and highway facilities serve two basic functions, mobility and land access. Mobility means the provisions for the movements of motorists between their points of interest or from one place to another. Land access means providing for the parking, storage or driveway access at the origin or destination of a person's trip.

Each facility type in a circulation element is designed to emphasize to varying degrees the mobility or land access function. Some facilities emphasize land access over mobility, while other streets emphasize mobility over land access. The following hierarchy delineates the typical function of the facilities used in this circulation element. The functional classification of the roads in an area is an essential task of roadway planning. It serves several useful purposes that include the following:

- Assignment of jurisdictional responsibility
- Development of design standards
- Assignment of funding responsibility
- Setting of priorities for improvements and maintenance

TABLE 2-18
Functional Classification

Facility Type	Emphasis
Freeway	Mobility with no direct land access and access limited to interchanges.
Expressway	Mobility with more frequent access to arterial streets, but no direct land access.
Major Arterial	Mobility with connections to freeways, arterial streets and other collector streets, and limited access to traffic generators.
Arterial	Mobility with connections to other arterial streets, collectors, some local streets and major traffic generators.
Collector	Connects local streets with arterial street, also provides access to adjacent land uses; balances mobility and access.
Local	Access to adjacent land uses only; no mobility function.

The above functional classification table (Table 2-18) shows that freeways are designed to provide for higher volumes of traffic at higher speeds over longer distances. Greater volumes and speeds require limited access and this is generally regulated by interchanges spaced at a minimum of one mile in urban areas and two miles apart in rural areas. Expressways also provide for higher traffic volumes, at higher speeds and longer travel distances. Access is provided via at-grade intersections generally spaced no closer than one-half mile apart. Expressways are intended to provide a high level of capacity in selected high volumes corridors.

Major Arterial streets provide access to major traffic generators and are typically designed with six lanes for through traffic, a parking/transit/right turn lane, and a median with dual left turn lanes at intersections. Access to adjacent land uses is limited. Arterial streets provide for moderate volumes at moderate speeds and distances with access to other arterial streets and collectors at half-mile intervals, and access to local streets and collectors at quarter mile intervals.

Arterial

Intended to provide the majority of a community's traffic carrying capacity, arterial streets provide connections via interchanges to the freeway system and to other arterial streets and collectors via intersections. Arterial streets, more than any other type of street, illustrate the conflicts which may arise between the provision of access and mobility. Typically, arterial streets are designed with two through lanes in each direction, a median with a left turn lane, and transit stop/right turn lanes on each side.

Collectors

Intended to provide connectivity between local street and the arterial street system, collectors provide access to major activity centers (commercial or employment) and some abutting land uses. Collector streets are typically designed with one through lane in each direction, a left turn lane, and parking/right turn lane/transit stop areas on both sides.

Local Streets

Local streets are intended to provide direct access to land uses, with movement of traffic a secondary purpose. Regular through traffic is considered undesirable on local streets. Local streets also serve as easements for all types of utilities. Typically, these streets are designed with one lane in each direction and parking is provided on both sides.

The proper designation of the community's street network can assist in the development of an efficient system for both mobility and access. The proper balance not only ensures that a street is sized to function properly, but it allows a community to properly allocate its resources to the streets needing additional capacity or improvements. A properly designed system will also prevent the use of local streets for through trips or the overburdening of freeways, expressways, and arterial traffic.

Problems begin to occur in a system when a street that is designated to provide mobility is asked to provide land access. Land access typically requires driveways and on-street parking to adequately address the land access function. When many access points or on-street parking is provided, traffic conflicts occur and the facility loses its ability to provide for mobility. Likewise, when a street designated for access is asked to provide mobility, conflicts occur. This generally happens on arterial and collector streets that were not developed with adequate access control or on local streets that are asked to carry through traffic.

2.4.5 Existing Street System

The following describes the existing circulation system for the community.

State Highways and Freeways

Highway 99 through Livingston is the only Freeway. It was converted to a four-lane freeway December of 1996. Highway 99 between Livingston and Atwater to the south and between Livingston and Delhi to the north is a State Highway with a number of access points onto the highway. Highway 99 through Livingston has two overpasses located in the northwest and southeast, dividing the City into two portions. Highway 99 provides regional movement and inter-regional access through the Central Valley from Bakersfield to Sacramento. The highway is also used extensively for travel between northern and southern California.

Arterials

There are ten arterial streets designated in the Study Area. Currently, arterial streets are developed with right-of-way widths of 80 feet depending on medians and turn pocket requirements. The City of Livingston only has one arterial developed to full arterial standards which is four lanes and a center turn lane. Most of the existing arterial streets in the community are one lane in each direction with stop signs at the intersections. (Table 2-19)

TABLE 2-19
Arterial Streets

North-South	East-West
Livingston-Cressey/Main Street	Olive Avenue
Winton Parkway	Walnut Avenue/Davis Street
Hammatt Avenue	Campbell Boulevard
Sixth Street between F Street and C Street	B Street
	F Street
	Peach Avenue

Collectors

A listing of collector streets in Livingston are shown in Table 2-20. Collectors are currently constructed on 60 feet to 70 feet right-of-ways with one lane in each direction and parking on both sides.

TABLE 2-20
Collectors

North-South	East-West
First Street between B Street and Peach Avenue	C Street and the realigned B Street between Seventh Street and Main Street
Prusso Street between B Street and F Street	
Seventh Street between F Street and Peach Avenue.	
Olds Avenue between Walnut Avenue and Olive Avenue	
Dwight Way between Peach Avenue and Olive Avenue	
Robin Avenue	

Local Streets

The remainder of the streets in the community are classified as local. Local streets are typically 60 feet right-of-way with two lanes with parking on each side.

2.4.6 Roads of Regional Significance

Regional access to the City of Livingston exists through rural type roadways. Roadways that provide regional access are State Route 140 to Lincoln Boulevard from the south and Santa Fe Drive to Cressey Road from the north. State Route 140 is a primary east-west arterial that extends from Stanislaus County from the west through Merced County to the east connecting to Lincoln Boulevard. Lincoln Boulevard is a primary north-south rural road that turns into Main Street at the intersection of Peach Avenue and Main Street. Santa Fe Drive is a major route that runs northwest to southeast from Modesto to Merced. It bypasses Cressey Road which comes into the City of Livingston. Cressey Road is a country road that runs from southwest to northeast and turns into Livingston-Cressey Road.

2.4.7 Existing 1988 General Plan

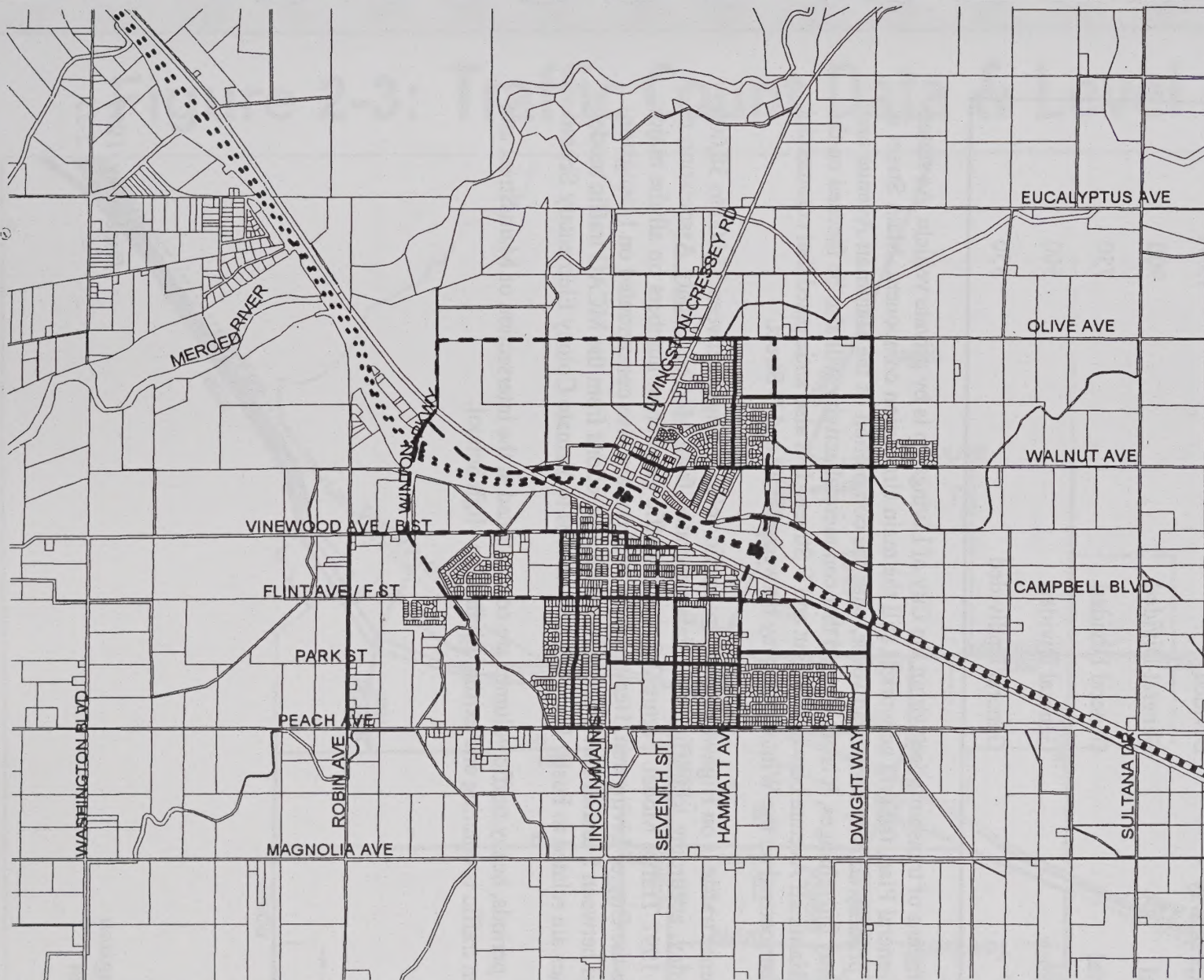
The City of Livingston adopted the current Circulation Element in 1988 as a part of the General Plan Update. It was amended in 1990, based on the routing of Highway 99 through the City of Livingston. Figure 2-2 depicts the existing circulation plan.

2.4.8 Existing Traffic Conditions

The existing traffic conditions were evaluated to develop a beginning point for understanding the City of Livingston's existing street network. This analysis was completed for selected arterial streets. The analysis focused on three specific issues, street capacity, classified system pattern and connectivity.

The evaluation of street capacity was the central focus of the analysis process. A street or highway's capacity is affected by a number of factors including the number of lanes, the location and spacing of intersections, the type of traffic control devices used (stop signs, traffic signs, etc.), the traffic signal timing plan, the use of on-street parking, the percentage of trucks, the level of transit activity, and the number and location of adjacent driveways.

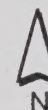
For purpose of analyzing these street and highway network conditions in the City of Livingston, the following capacity table (Table 2-21) has been developed to define carrying capacities of the street facilities in the community. Each facility is presented with a different number of lanes and with different geometric characteristics. The capacity shown for each facility represents the theoretical capacity of the street at Level of Service E. The table delineates the capacities of the various street segments to be evaluated. The capacity is defined as the number of vehicles per lane per hour that pass a specific point.



LEGEND

Circulation

- - - Arterial Streets
- Collector Streets
- Highway 99



1000 0 1000 2000 Feet



Quad Knopf

Existing Circulation Plan 1990 Amendments

Figure 2-2

TABLE 2-21
Merced County Association of Governments
Street Capacities

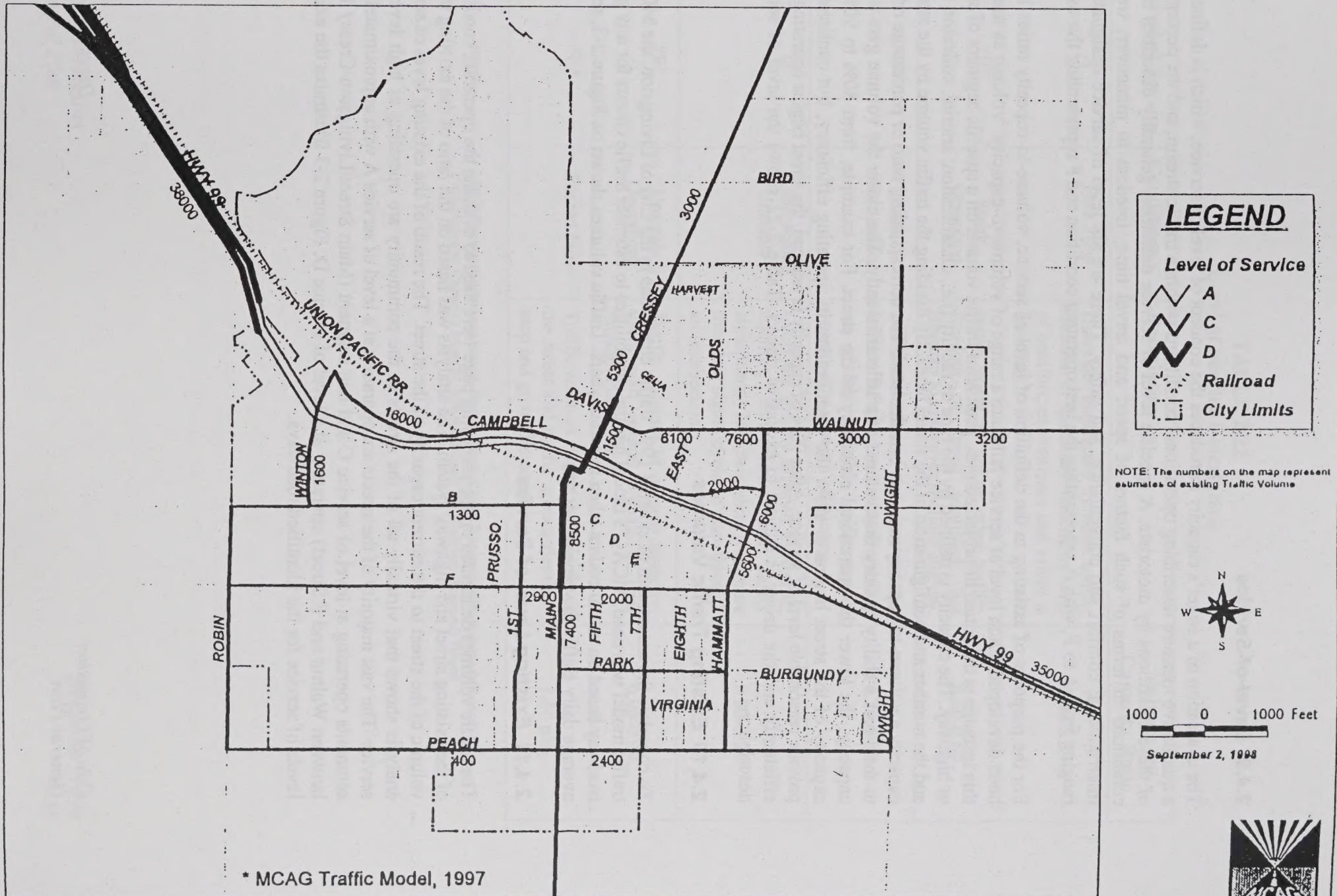
Facility	Geometric	Vehicles/Lane/Hr Capacity
Multi-lane Highway	Divided	2,000
Highway/Expressway	Divided	1,800
County Road	General-Divided	900
Urban Arterial	General Divided	750
Urban Collector	General Divided	500
Local	General Undivided	350

The primary means of transportation within the City of Livingston is by private vehicle. As stated in the 1988 General Plan, the grid network is still the main circulation component. Main Street is currently the primary activity center; however, with the completion of the Hammatt Avenue and Winton Parkway interchanges, it is anticipated that commercial activity will also be focused on the north side of Hammatt Avenue between Walnut and F Streets. It is also anticipated that commercial activity will be focused on the Winton Parkway between SH 99 and B Street.

The most intense traffic is on Highway 99, where traffic volume ranges between 35,000 to 38,000 vehicles per day, according to traffic count data generated from Merced County Association of Government 1997 Traffic Model. Figure 2-3 shows traffic generation numbers on all the major streets within the City of Livingston. Heavy traffic volumes are also concentrated on Livingston-Cressey Road between F and of Davis Street based on projections from the MCAG traffic model. These volumes are related to Foster Farms as well as trips to Yamato Colony Elementary School.

During peak periods, heavy traffic volumes are concentrated at the intersection of Main Street and F Street when traffic is entering and exiting Livingston High School.

Figure 2-3: Traffic Count Data & Level of Service



2.4.9 Level-of-Service

The evaluation of a street's capacity introduces the concept of level of service, which is defined as a qualitative measure describing operational conditions within a traffic stream, and the perception of these conditions by motorists. A specific level of service definition generally describes these conditions in terms of such factors of speed and travel time; freedom to maneuver; traffic interruptions; comfort and convenience; and safety. There are six level of service designations ranging from A to F, with A representing the best operating condition and F representing the worst.

For the purposes of assisting in the definition of level of service, volume-to-capacity ratios have been developed. Each level of service falls into a range of volume-to-capacity. Volume as used in this instance is the actual or projected p.m. peak hour traffic volume on a specific segment of street or highway. The capacity is defined by the type of facility (i.e., classification; arterial, collector, etc.) and the number and configuration of the travel lanes. By dividing the traffic volume by the street's capacity a volume-to-capacity ratio can be calculated. The corresponding ratio or percentage relates to the street's ability to carry that volume of traffic efficiently. The closer the volume gets to the capacity, the lower the operational efficiency of the street. For example, from 80% to 90% of capacity of the street begins to show the deterioration in operating efficiency, but continues to provide reasonable level of service. After 90% of capacity is reached, the street begins operating less efficiently and the driver is subject to excessive delays. Table 2-22 shows the level of service description.

2.4.10 Existing Traffic Volumes

To complete the assessment of existing 1997 traffic conditions in the City of Livingston, the MCAG traffic model was used. MCAG's model has the capabilities to estimate traffic counts for any given roadway based on actual counts taken in recent years. Traffic volumes shown on Figure 2-3, reflect average daily traffic in vehicles per day.

2.4.11 Existing Level of Service

The traffic volumes delineated on the preceding page were used to evaluate the operating conditions of the existing street and highway system. The analysis was based on the ratio of the existing traffic volume of the street to the current capacity of the street. The result of the existing level of service analysis shows that virtually all of the streets in the community are operating at high levels of service. The vast majority of the streets are operating at a level of service A with approximately ten segments operating at level of service C and one segment (Main Street/Livingston-Cressy Road between Walnut and F Street) operating at a level of service D. Figure 2-3 illustrates the existing levels of service for the identified roadways.

TABLE 2-22
Level of Service Description

Level of Service	Conditions	Description	Volume-to-Capacity Ratio
"A"	Free Flow	Users are unaffected by other traffic; freedom of speed and movement; level of comfort; convenience and safety is excellent	0.00-0.59
"B"	Stable Operation	Users begin to notice other traffic; freedom of speed continues; but freedom to maneuver declines slightly.	0.60-0.69
"C"	Stable Operation	Users are affected by other traffic; freedom of speed and maneuverability are greatly affected; traffic signals operate at maximum efficiency.	0.70-0.79
"D"	Approaching Unstable	Users are greatly affected by traffic; comfort, convenience and safety significantly affected; users wait more than one signal cycle to pass through an intersection.	0.80-0.89
"E"	Unstable Operations	Traffic volumes at or near capacity; users wait several signals to pass through intersection.	0.90-0.99
"F"	Forced Flow	Traffic volumes exceed the capacity of the street and traffic queues develop; stop and go traffic conditions.	1.00 plus

Source: 1985 Highway Capacity Manual, Special Report 209, Transportation Research Board.
1965 Highway Capacity Manual, Special Report 87, Highway Research Board

2.4.12 Existing Classified System Pattern

The pattern and spacing of a community's street system are as important as the proper designation of the functional classification of the streets. Arterial street spacing of approximately one mile with collector streets spaced one half-mile in between is ideal for communities like Livingston that have developed their circulation system based on the automobile.

This pattern accomplishes several goals. It balances the system by providing for mobility with arterial streets, thus not committing the community to an over expenditure of resources. It provides for movement within an area with collectors at half-mile intervals. It protects neighborhoods from through traffic by isolating local streets and promoting through movements on collectors and arterial streets which are designed to accommodate these trips. Finally, it complements the Land Use Element by providing locations along arterial streets and collectors for traffic generating activities. The following discusses the relationship of Livingston's existing street pattern to the pattern described above.

Regional access to the Livingston area is provided by a number of entrances to the City. As described before, Freeway 99 has two off ramps into Livingston, Lincoln Boulevard/Main Street, Livingston-Cressey Road, and Walnut Avenue all provide regional access to Livingston. The majority of regional access to Livingston are two-lane divided facilities, with Freeway 99, a four-lane facility.

2.4.13 Connectivity

The success of a community's street system is greatly affected by the concept of connectivity. Connectivity describes the continuity of a street system. Typically, street systems develop over a long period of time and can develop missing links in the network. These missing links can create both local and community wide problems as the traffic that would logically use the missing link must use another street to complete a trip. Livingston's street system has developed with several connectivity problems and several others that may cause problems in the future.

Generally, Livingston has developed its existing street system with fair connectivity. Most of the arterial streets are continuous within the community and the expansion of these facilities to provide for future development for the most part can be accommodated. However, care will need to be taken to ensure that Hammatt Avenue, Winton Parkway, F Street, and Olive Avenue are connected to other major elements of the circulation system.

2.4.14 Transit

The City of Livingston and the surrounding areas are served by a couple different public transportation organizations. The following provides a description of some of these transit services.

Public Transit

Merced County Transit, "The Bus-Merced County Transit," operates the Merced Region's transit system through the Transit Joint Powers Authority for Merced County. The fixed route system operates Monday through Friday.

There are a variety of transit options available within the Merced Region including buses, vanpools, and rail. Some of these modes are fixed routes, meaning they travel a set course, while others are demand responsive, usually referring to door-to-door service; some arrange the trip while others are oriented to serve the majority of the population; and some are open to general public while others serve specific clientele. However even with all of these services, gaps in the existing system appear because trips are often restricted by purpose and options may not be easily recognizable by the consumer.

Fixed route and demand response services are ADA compliant. Buses are equipped with wheelchair lifts.

Fixed Route Services

Fixed route bus service is regularly scheduled public transit service provided over a fixed route of travel adhering to a specific timetable of service. Service may be provided at fixed stops or on a flag down basis.

Two routes service for City of Livingston directly. Within Livingston, the Red Route, provides two-way service from Livingston, Atwater, Winton, Merced. The transfer point in Livingston is located at the public library.

The North County Shuttle provides service to Turlock which then transfers to the Turlock Dial-A-Ride service and the Stanislaus County Transit service.

Demand Response Service

Transit service is also provided on a door-to-door basis that requires a telephone call or other service request from a customer to the transit dispatch center. Transit service is then radio dispatched within a reasonable period of time to the customer within 30 minutes of the pickup request. Service provided on every route with a wheelchair lift-equipped bus.

Three buses provide demand responsive services (Dial-A-Ride), restricted for the use of senior citizens 60 years of age and the disabled. Seniors and the disabled pay half rate, and children five years of age and younger ride free when accompanied by a fare paying passenger. According to the Transit Service Plan, "disabled" is defined as "any individual who is unable, due to the result of any physical or mental disability, to board, ride, navigate or disembark the regularly scheduled fixed route services contained in the Transit Plan."

Transit drivers receive training with specific emphasis on handling/assisting the physically and mentally handicapped; sensitivity training in accommodating all handicapped service requests, and screening, registering and determining/certifying ADA disabled and senior citizen demand response service eligibility.

Bicycle and Pedestrian Facilities

Currently, there are no existing bicycle facilities within the City of Livingston. The City does have sidewalks; however improvements need to be made, as sidewalks do not run consistently throughout the City. Sidewalks do not extend entirely on Prusso Street, for example. Sidewalks in this area would enhance safety for children who walk to Selma Herndon School which is located on Prusso Street.

2.5 PUBLIC FACILITIES AND SERVICES

2.5.1 Water

The source of domestic water for the City of Livingston is groundwater, drawn from seven groundwater wells. In general, the groundwater quality of the City is good with the exception of the high levels of the pesticide Dibromochloropropane (DBCP) and nitrates (NO_3).

DBCP was used by farmers for about twenty years to control nematodes in soils. It has been outlawed in California since 1977 because evidence shows it to be a cancer-causing substance. DBCP concentrations are generally found in shallow wells less than 100 feet deep. Like many other San Joaquin Valley communities, Livingston has experienced DBCP contamination in City wells to the point that by 1990 four wells were closed due to DBCP levels that exceeded the maximum contaminant level. To date, well closure has addressed contamination. Current city wells are sealed to 120 feet to prevent contamination from shallower groundwater. High nitrates have not persisted in the vicinity of operating water wells.

Together, the existing seven potable wells and the one million gallon storage tank at Burgundy and Chardonnay Streets, produce approximately 9,100 gallons per minute (gpm).

Prior to agricultural and urban development, groundwater moved from areas of recharge along the eastern rim of the Valley to areas of discharge along the Valley's axis. Recharge was primarily by seepage from stream flows. Under present conditions, groundwater is recharged from several sources: the Merced River, percolation from the MID canals which pass through the area, from storm water detention basins, by percolation from treated wastewater disposal facilities and from percolation attributed to excess applied surface irrigation water. Groundwater depth in the Livingston area is approximately 25 feet below the ground surface. Figure 2-4 depicts current water infrastructure.

Reports completed for the 1988 General Plan Environmental Impact Report (SCH number 87063010) and the 1992 Water Distribution System Study and Master Plan have found that adequate long term groundwater supply exists for buildout of the City of Livingston's Sphere of Influence.

Improvement of the production, storage, distribution, and treatment systems will be needed to take advantage of this resource. However, the water system can be readily and incrementally expanded to serve newly developed areas. Fees can be developed on the basis of the proposed new wells and water mains needed for future development.

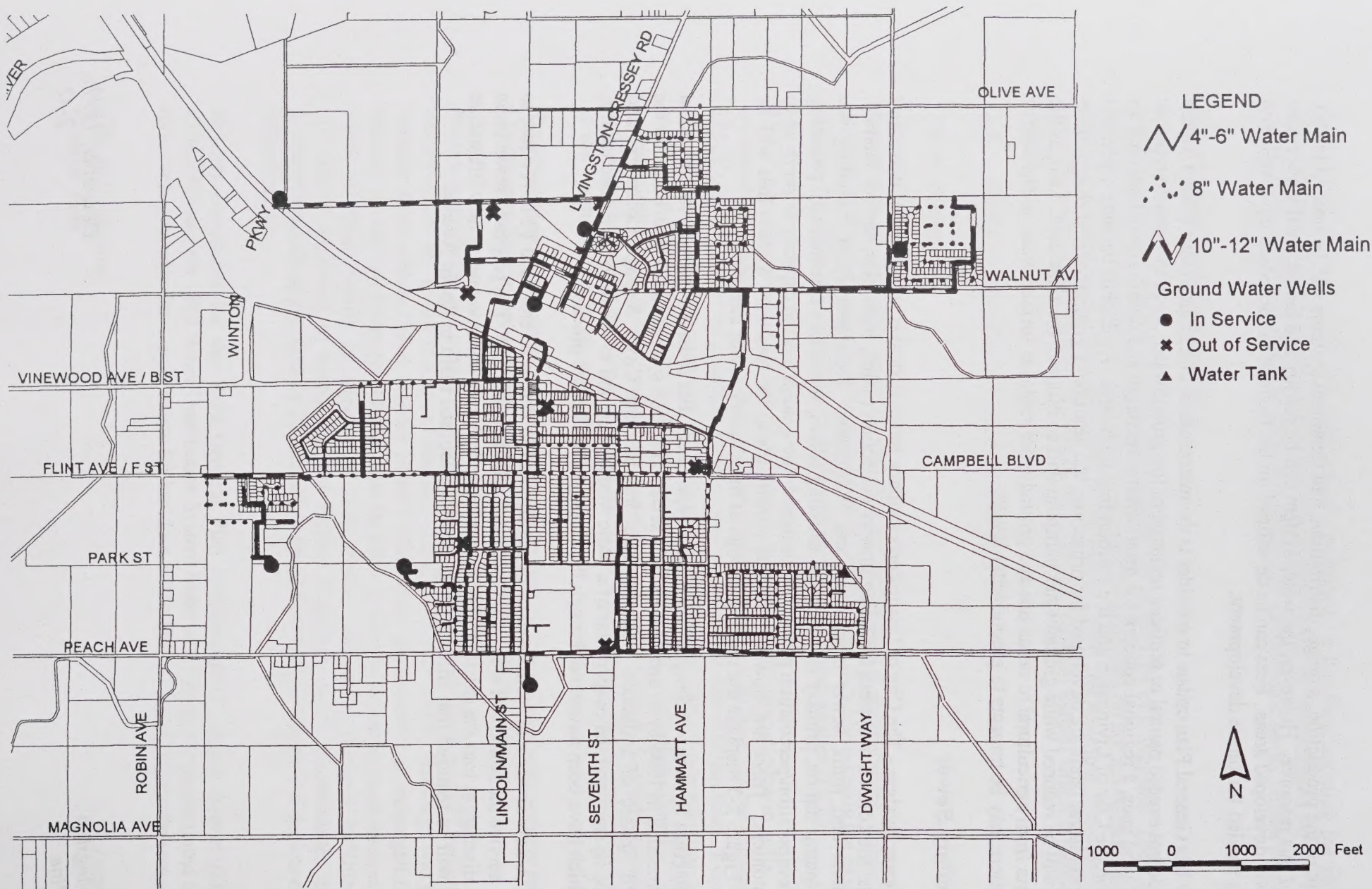
An issue for this General Plan update to consider is the maintenance of a groundwater budget, where extractions do not exceed natural or artificial recharge of the groundwater. As urban growth replaces agricultural land uses, a regional concern for groundwater recharge and overdraft will become an issue for both the City of Livingston and the surrounding farm land. As ditches become piped and irrigated agricultural lands are developed for urban use, the amount of groundwater recharge from these wells will be reduced while groundwater pumping will continue in the same area. Also, as the land converts from agricultural to urban use and groundwater replaces surface water as the source of supply, there may be impacts to groundwater levels.

2.5.2 Sanitary Sewer

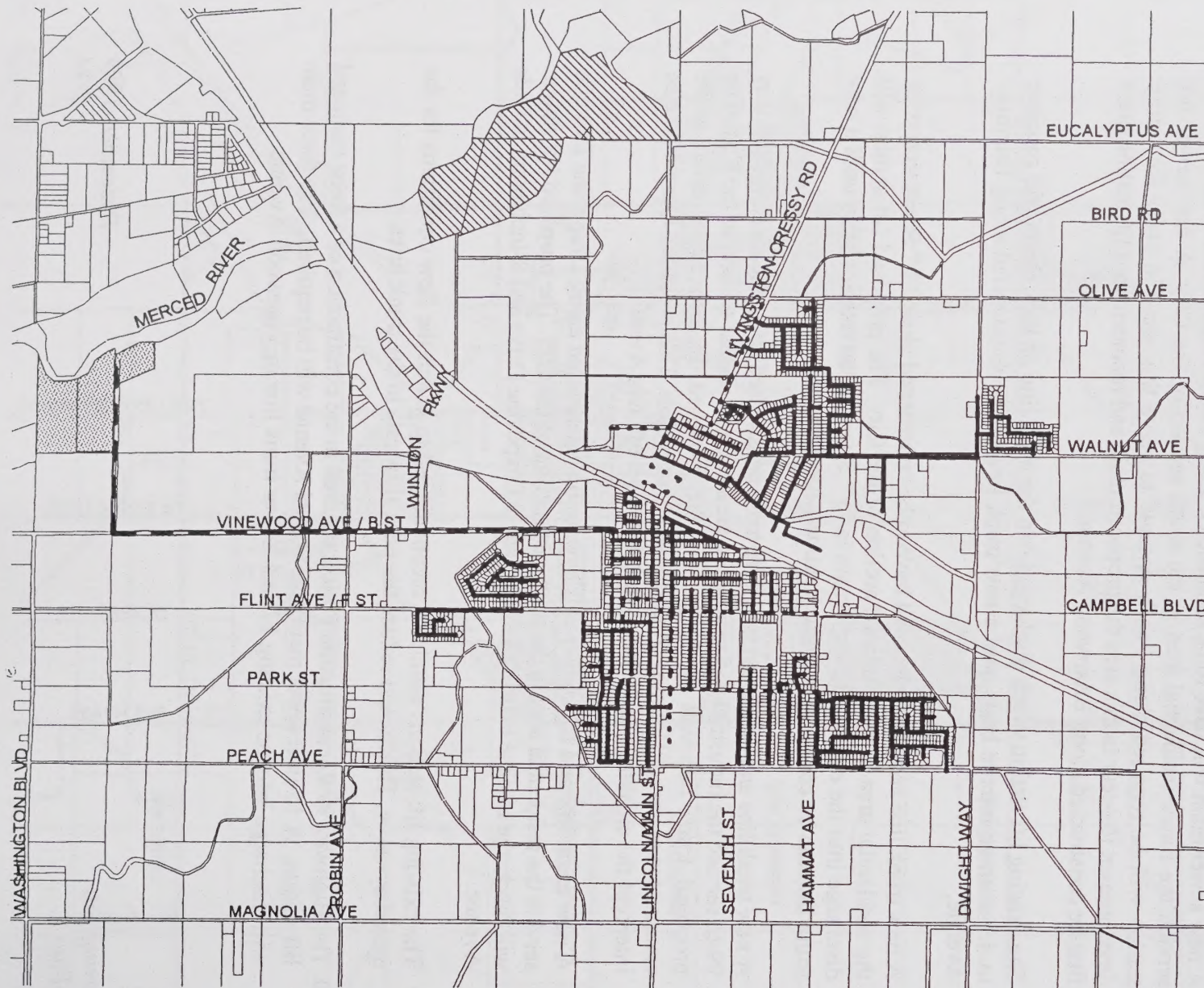
Sanitary Sewer System - The City of Livingston's sanitary sewer system is comprised of two major components, the collection system including gravity collection mains, manholes, service laterals, pump stations and trunk sewer mains, and the Wastewater Treatment Plant including the headworks/pump station, primary clarification, trickling filters, secondary clarification, polishing ponds and evaporation/percolation ponds. As designed, the system has the capacity to serve up to 20,000 customers. There are, however, critical constraints to the treatment system that will be discussed. Figure 2-5 displays the major elements of the sanitary sewer infrastructure.

Sewer Collection System - *A Sewer Collection System Study and Master Plan* was completed in 1992 and amended in 1996 by to update the City's sewer collection system master plan based on the then-revised Sphere of Influence. The investigation into the City's Sewage Collection and Conveyance System and the preparation of a basic Master Plan led to the following conclusions, some of which have been advanced through the General Plan update process:

1. A new sewer main will have to be constructed in Robin Avenue and Flint Avenue to service the residential area in the southwest section of the City. The proposed sewer main discharges into the existing 27-inch trunk line in Vinewood Avenue. A new lift station will be required that will discharge into the proposed main in Robin Avenue



2. The existing 12-inch sewer main constructed in Briarwood Drive from Vinewood Avenue to F Street is adequate to service the residential area in the southeast section of the City. The existing sewer pump station will have to be reconstructed to serve the area. The reconstructed lift station will also handle the discharge from the proposed sewer main along Peach Avenue.
3. The existing trunk line and lift station along "I" Street will continue to service the southwest residential area. The existing sewer main discharges into the existing 27-inch trunk line in Vinewood Avenue.
4. A new sewer main will have to be constructed along Peach Avenue and Main Street to service the future residential area in the south section of the City. A new sewer lift station will be required along Peach Avenue to serve this area. In order for future development to occur in this area the proposed main and reconstructed lift station must first be constructed along Briarwood Avenue.
5. The existing lift station which discharges into the trunk line on Park Street will continue to do so on an interim basis until a new trunk line can be constructed along Hammatt Avenue.
6. A new trunk line and lift station will have to be constructed along "F" Street to service the residential area in the southeast section of the City. The proposed lift station will discharge into the existing 10-inch main in "F" Street on an interim basis until a new trunk line can be constructed along Hammatt Avenue.
7. A new trunk line and lift station will have to be constructed along the existing Highway 99 to service the industrial and residential area in the northeast section of the City. The proposed trunk line will discharge into the proposed 15-inch sewer main to be constructed as part of Highway 99 Reconstruction project. This proposed line would also intercept the existing 8-inch line in the alley East of Olds Avenue.
8. A new trunk line and lift station will have to be constructed along Grapevine Drive to service the residential area in the northeast section of the City. The proposed lift station will discharge into the existing 8-inch main in Grapevine Drive and 8-inch main in Olds Avenue.
9. The existing lift stations should be reconditioned to match the flow conditions for the area they serve. This would reduce the peak flow rate in the trunk lines.
10. The Highway 99 Reconstruction Project resulted in the construction of a force main and lift station. A 15-inch sewer main near Stefani Avenue will be required. The force main will discharge into the existing 27-inch sewer trunk line in Vinewood Avenue.



LEGEND

-  6"-8" Sewer Main
-  10"-15" Sewer Main
-  27" Sewer Main
-  Private Industrial Waste Water Treatment Plant
-  Municipal Waste Water Treatment Plant



1000 0 1000 2000 Feet



11. The Highway 99 reconstruction resulted in a conduit for a sewer force main in the Winton Parkway overcrossing. A sewer line will need to be installed in the overcrossing to serve the area to the north.

The investigation into the City's Sewage Collection and Conveyance also led to a recommendation that the City have further detailed studies and design made on areas as individual developments are proposed, especially in areas where development can be served with alternate main extensions. It is also important to realize that the main sizes shown on the basic Master Plan are approximate only and is not to be used for construction purposes. A rigorous analysis will be required as the actual growth patterns; population density and flow requirements are determined.

Wastewater Treatment Plants - The plant west of SH 99 has a hydraulic design capacity of 1.8 million gallons per day (mgd) with monthly average inflow of 0.9 mgd. However, this capacity has been severely limited by a reduced water disposal capacity caused by the degradation of percolation rates in the evaporation/percolation ponds. In order to keep pace with influent rates, the City has had to discharge disinfected wastewater to the Merced River. Discharges to the river have exceeded state water quality standards for biological oxygen demand and total dissolved solids. Finding that the level of treatment prior to discharge did not meet state water quality regulations, the Regional Water Quality Control Board issued a Cease and Desist order in February, 1998 to prohibit this practice and have the city conduct an investigation into the causes of the pond failures and determine a remedy that will bring the plant's operation back into compliance.

The California Regional Water Quality Control Board has ordered the City of Livingston to submit technical reports recommending remedies to restore percolation and to complete short-term improvements. The state has also asked for a moratorium on new sewer connections until this issue can be resolved.

The plant west of SH 99 has a capacity of six mgd and has an average inflow of 4 mgd. This plant is limited to primary treatment. Additional users will be limited to those with an effluent that is compatible with this plant's treatment limitations.

2.5.3 Storm Drainage

The City of Livingston's storm drain collection system was last studied on a comprehensive basis in 1992 with the completion of the *City of Livingston Storm Drain Collection System Study and Master Plan*. The Master Plan presented data and information that would provide a guide for development, be readily available for future reference for more detailed studies as needed, and to provide preliminary opinion of costs for storm drainage facilities and an acreage assessment fee for development in individual watersheds.

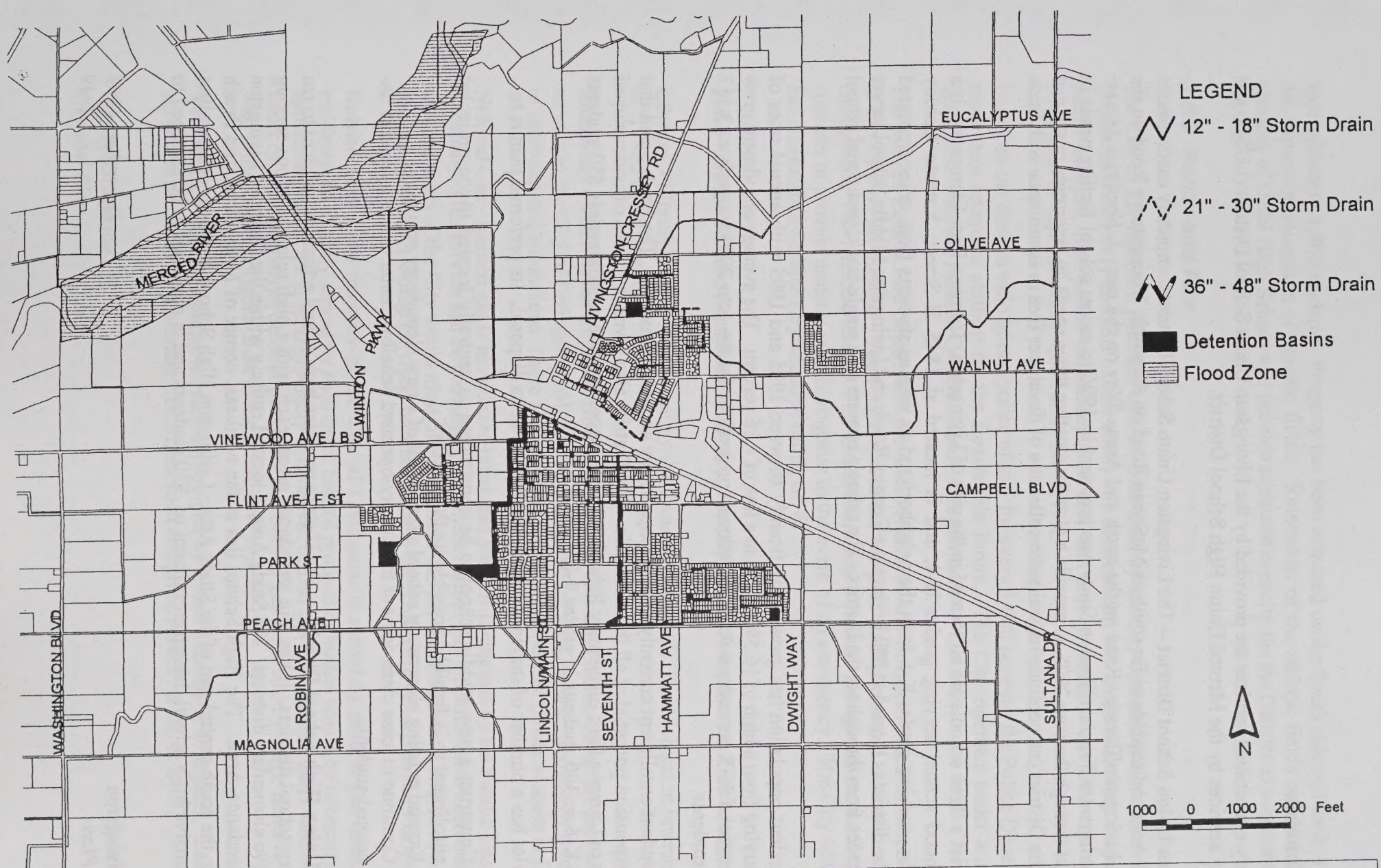
The scope of the study generally delineated the general boundaries for urban drainage areas (watersheds) of undeveloped areas. It determined basic drainage facility concepts for each drainage area for the design storm, estimated volume of runoff for each water shed and estimated a detention basin volume to contain the runoff. Finally, an opinion of costs and acreage assessment fees for each watershed was prepared.

The study concluded that the best apparent technical solution for handling storm drainage in the City would be by constructing a gravity line to directly convey the runoff to the Merced River. However, the cost to construct this drainage facility was prohibitive. As an alternative, storm water is temporarily stored in detention basins, each one serving a watershed in the urban area. Each watershed will require one lift station to drain the storm waters at a controlled rate to available Merced Irrigation District (MID) canals. The detention basins will store the City' storm runoff during peak periods, allowing the pump stations to discharge over a longer period of time to the Merced Irrigation District facilities. In the event that the Merced Irrigation District facilities are themselves temporarily unavailable, the basins will also accommodate, on a short-term basis, the potential temporary shut-off of these pump stations. Discharge to the canal is regulated by a float-operated pump switch which shuts off discharges when the safe canal carrying capacity has been reached. Responsibility for repairs of these facilities currently rests with the City of Livingston.

Figure 2-6 shows storm drain facilities as adopted in 1996.

The watershed boundaries originally depicted areas of similar land uses. The type of land use in a given watershed determined the suitability of discharge of detained storm waters to the Merced River. For example, because of the nature of industrial land uses, they were found to have higher potential for storm water runoff contamination, perhaps with volatile organics or petroleum products. For this reason, it was found that each industrial parcel will be required to have its own basin and will have to obtain permission from the Merced irrigation District to discharge run off into that agency's facilities. Run off from largely residential areas, on the other hand, will be permitted to drain the accumulated run off into MID facilities, presumably because of the lesser potential for contaminated run off.

The City's remaining undeveloped areas should be served by detention basins as they ultimately develop, due to continued indications from the Merced Irrigation District that additional transport capacity in their facilities is not available. These undeveloped areas should be divided into drainage areas that can be engineered to cost-effectively dispose of runoff flows into permanent retention/detention basins. The 1992 *Master Plan* opinion of costs for recommenced new development area facilities estimated that the system development charges to facilitate storm drainage facilities in the undeveloped areas would range, in 1992 dollars, from \$4,400/acre to \$24,980/acre.



2.5.4 Schools

Elementary educational services are provided by the Livingston Union School District (LUSD) and secondary services by the Merced Union High School District.

Livingston Union School District -- The Livingston Union School District completely encompasses the Study Area and extends as far south as McSwain Road on the south, Youngstown Road on the west, the Livingston/Cressey Road on the north and Arena Way on the east. A *Facilities Master Plan/Development Fee Justification Study* was prepared in 1996 to assess school facility needs in the District through the year 2005, to provide a plan for meeting those needs, to determine costs, and whether the District can continue to justify the collection of developer fees in accordance with State law.

The District's three schools are all located in the city of Livingston. Campus Park Elementary is a neighborhood school serving grades K-4, and is located at 1845 H Street; Yamato Colony Elementary, serving grades K-5 from the neighborhood as well as students from unincorporated areas of the district is located at 800 Livingston-Cressey Road; and Livingston Middle School serves the 5-8 grades from throughout the District. The schools operate on a single-track, traditional school schedule.

LUSD student population has grown significantly between 1985 and 1995 with annual rates of growth varying from a high of 16.59 percent to a low of 1.16 percent. The average enrollment grew by an average of 5.35 percent per year. Enrollment projections for the year 2005 range from 3,117 to 3,380 students.

District student enrollment currently exceeds capacity by about 440 students. The *Study* noted that there is expansion potential at all three schools. The District also owns 9.1 acres of undeveloped land west of Campus Park Elementary School that could accommodate approximately 550 students in grades K-6 or 300 students in grades 7-8.

The District has a number of student-housing alternatives at its disposal. Its preferred plan is to:

- ▶ Construct a new middle school to be constructed as centrally located to the projected enrollment as is feasible, possible south of SH 99;
- ▶ Expand existing elementary school sites in lieu of a new elementary school;
- ▶ Continue to lease classrooms at the County-operated Schelby Center to accommodate un-housed students.

Merced Union High School District -- The District provides high school education services to ten elementary school districts. It has four attendance areas, each with a high school campus serving three to five elementary districts. The Study Area is located entirely within the District's Livingston High Attendance Area. The High School lies at the northeast corner of Main Street and Peach Avenue in the south central part of the Study Area. Livingston High School, the District's smallest comprehensive high school, has an enrollment of 930 students and is proposed to be enlarged to

approximately 1,800 students. Property has been acquired on the South side of Peach Avenue for the expansion/relocation of athletic fields. Relocation of the athletic fields combined with the opening of Delhi High School will provide adequate capacity for the District to accommodate new growth.

2.5.5 Police and Fire

The City of Livingston is patrolled on a 24-hour basis by the City-operated police force. The Police Department currently consists of one chief, one commander, two sergeants, three corporals, nine patrol officers, five police dispatchers/matrons, and one secretary. In 1997 the department responded to approximately 4,000 calls for service.

Based on the desired ratio of one police officer for every 1,000 persons, the Police Department has more than adequate staffing for the foreseeable future. The City operates under a mutual aid agreement with the Merced County Sheriff's Department.

The Merced County Fire Department provides fire, rescue and emergency medical response service to the City of Livingston. The Fire Department has paid firefighters and twenty-one volunteer firefighters. The Merced County Fire Department has a mutual aid agreement with the City of Atwater to provide assistance to Livingston in the event of an emergency. The City of Livingston has a Insurance Service Organization rating of 6.

2.5.6 Other Public Facilities: Library, Natural Gas, Telephone, Electricity, Cable

Library - Library service is provided by the County of Merced. The Livingston branch is located at "I" and Main Streets.

Electricity - The Merced Irrigation District and Pacific Gas and Electric Company provide electrical service to the City of Livingston. All electrical services for the City are provided by a combination of inter-ties and substations. There are currently no locally-produced power sources in Livingston.

Natural Gas - Natural gas is provided to urbanized areas of Livingston by the Pacific Gas & Electric Company. This service can be provided only where natural gas pipelines have been installed. The rural outskirts of the City would most likely not have this service. Residents living in such areas who run gas appliances would purchase bottled propane from one of several providers in the region.

Bottled Gas - The majority of the City of Livingston is served by natural gas lines. For those residents not directly served by such lines, bottled propane or butane would be necessary to run gas appliances. There are several providers who deliver bottled gas to residential users who own or lease tanks on their property. Several providers sell bottled gas from fixed storage tanks to consumers who bring small, portable tanks to the providers' premises.

Telephone - Local telephone service is provided by Evans Telephone Company. Long distance service is provided by a number of carriers such as Sprint, AT&T, GTE, & MCI.

Cellular Service - Cellular telephone service is provided for the City of Livingston by a number of companies including Airtouch, Cellular One, and AT&T Wireless. Calls are placed from cellular phones, which are simply wireless mobile or portable phones that have radio-frequency (RF) transmitters and receivers. The RF signals are received by "cell" sites (hence the name "cellular"), which are RF receiver/transmitter stations situated on towers that are strategically placed to be able to transmit over or around topographic barriers. Signals from cellular phones are transmitted from cell to cell until they reach a mobile telephone switching office (MTSO) in the local calling area that the caller wishes to reach. Here, the call is linked by MTSO from the cellular network to the local telephone office.

Cable Television – Charter Communications is the only cable provider currently serving the City of Livingston. Charter Communications does receive some competition though from wireless satellite services such as Primestar within the Livingston area.

2.5.7 Health Services

The Livingston Medical Group clinic provides primary care, acute care, and some internal medicine, laboratory and x-ray services to the community. It has a medical staff of four doctors, two Nurse-Practitioners and a Physician's Assistant. The clinic is open Monday through Thursday from 8:00 a.m. to 8:00 p.m., Friday 8:00 a.m. to 5:00 p.m., and Saturday 8:00 a.m. to 4:00 p.m.

2.5.9 Postal Services

The Livingston Post Office is located at 4th and B Streets.

2.5.10 Solid Waste Collection, Disposal, and Management

The City of Livingston has contracted with a private carrier, Gilton Solid Waste Management, Inc., to provide pickup of solid waste within the City limits. Residential waste is collected once per week and commercial/industrial waste is collected from one to five times a week depending on the customer's need. Waste is delivered to State approved and permitted solid waste facilities which include but are not limited to Gilton Resource Recovery/Transfer Facility, Inc., Modesto, Turlock Transfer Station, Turlock, or Highway 59 Landfill, Merced. In 1997, Merced County approved an expansion of the Highway 59 landfill, which upon completion will provide enough capacity to remain open for an additional 30-35 years.

2.6 RECREATION, ARCHEOLOGICAL, AND HISTORICAL RESOURCES

2.6.1 Existing Park and Recreation Facilities and Programs: Types, Conditions, Monetary Value and Location with Respect to Population

The City of Livingston Department of Public Works maintains a system of parks for its citizens. The Livingston Police Department provides recreation services. A *Parks and Recreation Master Plan* was adopted in 1993. *The Master Plan* noted the significance of recreation to Livingston and

provided a framework for orderly and consistent planning, acquisition, development, and administration of parks and recreation resources, programs and facilities. It continues to serve as a foundation and guide for assisting community leaders in future decisions and actions regarding recreation programs, park facilities, and opens space within Livingston. In 1993 it was observed that the city was fortunate that its growth had not yet overcome its ability to provide sufficient recreation, parks, and open space for its residents. However, growth had created additional demand for recreation in a time when city operation and maintenance funds were diminishing. Livingston was faced in 1993 with important decisions regarding the allocation of these limited resources to meet the growing needs.

Livingston has nine existing parks within the City limits, totaling approximately 34 acres as well as the Livingston Museum and a recreation center. Arakelian Park (6.5 acres), Memorial Park (5.6 acres), Lucero Park (1.2 acres), Livingston Community park (13.9 acres), and East Avenue Park (2.5 acres). The parks offer recreational opportunities and/or host community events. The *Parks and Recreation Master Plan* identified locations for seven new City parks. Open space and recreation facilities at Livingston's schools are also considered part of these park inventory due to the cooperative agreement between the City and school district. A major soccer facility and park is planned for the Southwest corner of Walnut and Dwight.

Arakelian Park, located at the western terminus of J Street serves a dual purpose as a park and a flood control basin. This assists in flood control and also helps recharge the groundwater. All of the proposed parks would have areas designated for passive recreation and open space. The five proposed new parks will provide the City approximately 25 acres of additional park area. The new parks are planned for areas that are currently on or near the periphery of the now urbanized area.

2.6.2 Historical Cultural and Archeological Resources

Research to identify known and potential cultural resources in the Livingston area and to evaluate what constraints known resources might have on the development of a general plan was conducted in 1998. The background information collected in this phase will provide a basis for evaluation of the significance of individual resources, that is, an historic context will be identified that is important in the cultural history of the area. Research sources employed in this study included:

- ▶ Central California Information Center of the California Historical Resources Information System
- ▶ National Register of Historic Places, including listed and eligible properties
- ▶ California Inventory of Historic Resources
- ▶ California Historical Landmarks
- ▶ California Points of Historic Interest
- ▶ Other registers (through Information Center)
- ▶ Historic maps
- ▶ Published texts.

Previous Studies

There have been several previous cultural resources studies in the Livingston vicinity. None of these have recorded significant cultural resources in the vicinity of the city. It should be noted that there have been no surveys of the built environment in the city which focussed on architectural history or historical relationships with important persons or events. Some structures near the SH 99 route were evaluated by CalTrans in 1984 and 1985 as part of the studies on the freeway reconstruction. These structures were not considered historically or architecturally significant. Other than this, the previous studies have involved limited survey areas and, in some cases, an emphasis on archeological rather than historical resources.

The following studies, discussed in chronological order, have been conducted in the immediate vicinity of Livingston. It is interesting that the earliest of these only dates to 1984 and that no other study was reported to the Information Center until eight years later. (The CalTrans studies, noted above, apparently were not transmitted to the Information Center.) This reflects the small number of projects in the area that have required study under the National Environmental Protection Act or the California Environmental Quality Act, thus, the relatively limited state of our knowledge of the cultural resources of the area.

A survey conducted for a 2.6 acre proposed subdivision north of the downtown area (Napton 1984) produced negative results. A survey of a proposed cogeneration project (Napton 1992) involved examination of narrow corridors on proposed power lines and gas pipelines on the periphery of the city. The same can be said for two surveys of the proposed Merced-Turlock Intertie (Napton 1995a, 1995b) that were related to the cogeneration project. Another corridor survey, this time involving a proposed oil pipeline, followed, generally, the old route of SH 99 through Livingston (Woodward-Clyde Consultants 1995). This was followed by a fourth survey related to the cogeneration project (Napton 1996) that again skirted the downtown area. Finally, two surveys for the Merced Irrigation District involved a proposed 115 kV power line (Napton 1997a) and a revised alignment plus consideration of the Livingston Canal (Napton 1997b). The latter is the only case of where a potential historical resource was identified and evaluated in the Livingston vicinity, however, the canal was not considered eligible for the National Register of Historic Places.

Since the previous studies related directly to the Livingston vicinity have yielded virtually no specific information, consideration of the cultural resources potential in the General Plan area will have to depend on regional information from more general sources.

Prehistory

The project area lies within the historic territory of the Yokuts people. Members of the Penutian language family that held all of the Central Valley, San Francisco Bay, and the Pacific Coast from Marin County to Point Sur, the Yokuts were a distinct language grouping in California. Yokuts communities had true tribal division with group names, a trait absent among other California Indian people (Kroeber 1925). Each tribe spoke a particular dialect common to its members but similar enough to other Yokuts that they were mutually intelligible (Kroeber 1925). The territorial boundaries of the various Yokuts tribes and their neighbors have been delineated by Cook (1955). The Yokuts held the valley floor from the Tehachapis to Stockton, where they were bordered on the north by the Plains Miwok and on the west by the Saclan (Bay Miwok) and Costanoan, also members of the Penutian

family. The Miwok of the foothill linguistic division held the Sierra foothills along the eastern territorial boundary to the Fresno River (Barrett and Gifford 1933). From the Fresno River, south, to the Tehachapis, the Sierra Nevada was the home of members of the Shoshonean linguistic group, with southern territorial limits along the Tehachapis also controlled by Shoshonean people. The Coast Ranges on the west from Point Sur southward were held by the various peoples of the Hokan language family.

Although many of these neighboring peoples were members of separate language families, cultural traits appear to have been shaped more by environmental influences than by linguistic affinities. Thus, the Plains Miwok were more similar to nearby Yokuts than to foothill members of their own language group. Similarities in cultural inventory co-varies with distance from other groups and proximity to culturally-diverse people. The material cultural of the southern San Joaquin Yokuts was, therefore, more closely related to that of their non-Yokuts neighbors than to that of delta members of their own language group.

Trade was well developed, with mutually beneficial interchange of needed or desired goods. Obsidian, rare in the valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and perhaps came also from Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among the many items exported to the east by Yokuts traders (Davis 1961).

Economic subsistence was based on the ubiquitous acorn, with substantial dependency on gathering and processing of wild seeds and other vegetable foods. The rivers, streams, and sloughs that formed a maze within the valley provided abundant food resources, such as fish, shellfish, and turtles. Game, wildfowl, and small mammals were trapped and hunted to provided protein augmentation of the diet. In all, the eastern portions of the valley provided a lush environment of varied food sources, and the estimated large prehistoric population reflected this abundance (Cook 1955; Baumhoff 1963).

Settlements were oriented toward the water resource, with major villages situated near waterways that provided not only reliable water supplies, but substantial food sources. Houses varied in size and shape (Latta 1949; Kroeber 1925), with most constructed from the readily available tules found in the extensive marshes of the low-lying valley areas. Housepit depressions, still extant in the protected areas of the San Joaquin valley, range in diameter from three to 18 meters. However, one communal structure found at a village site on Los Banos Creek measured 93 by 84 feet (Kroeber 1925:522-523; Latta 1949:87-97; Pritchard 1970; Wallace 1978a:450-451; 1978b:464-465). Arrangement of the buildings in a village was orderly, as Stephen Powers described:

(The Yokuts) display in their encampments a military precision and regularity which are remarkable. Every village consists of a single row of wigwams, conical or wedge-shaped, generally made of tule, and just enough hollowed out within so that the inmates may sleep with the head higher than the feet, all in perfect alignment, and with a continuous awning of brushwood stretching along in front. In one end-wigwam the village captain; in the other, the shaman or si-se'ro (Spanish, hechizero). In the mountains there is some approach to this martial array, but it is universal on the plains (Powers 1877:370-371).

Latta (1949:99) reported that a village of 200 to 300 Yokuts might have four or five large houses that were used for ten or twelve years or until a family member died, and which time the Indians burned the house in which the death had occurred. If a sick or aged person died outside the dwelling, the family did not burn the house. When a Northern Yokuts died, his body was cremated or buried in a flexed position. Southern tribes normally buried their dead, although they did cremate shamans, persons who died away from their village and, among the Tachi, persons of great importance (Wallace 1978b:468).

The most devastating impacts of the Spanish colonization effort were not the result of military conflicts, but came from Old World diseases newly-introduced to the native people. Three major epidemics swept through the missions: a respiratory virus at Mission Santa Clara in 1777, pneumonia and diphtheria that killed children from Mission San Carlos to San Luis Obispo, and the devastating measles epidemic that killed at least 1600 natives at missions from San Francisco to Santa Barbara (Castillo 1978:103). These epidemics at the missions were followed in 1833 by a severe malaria epidemic that claimed thousands of lives and virtually destroyed many villages and tribes. Up to three-quarters of the population in the San Joaquin Valley was killed by this contagious disease, which was brought to California by a party of Hudson's Bay Company fur trappers from the Oregon country. In 1834, the Mexican government de-secularized the missions and many of the Indian residents returned to their former territories, where they survived by a combination of strategies that included traditional hunting and gathering and livestock raiding (Wallace 1978a: 459-460; Wallace 1978b: 468-469).

History

Livingston has long been a shipping and supply center for surrounding farms and ranches. Originally called Cressey, after a major landowner in the area, the town was forced to change names in a rather odd fashion. When the Santa Fe Railroad was completed in this area a station was established on another part of Cressey's property and was also named Cressey. The postmaster at the original Cressey also owned property near the new station and did not wish to change his mailing address. He led a successful campaign to change the name of the original Cressey to Livingstone, presumably after the explorer David Livingstone. The "e" was eventually dropped from the name of the town (Clark 1973:52). This attribution of the source of the name is likely to be correct since the railroads were completed in this area in the early 1870s, immediately after the famous Stanley and Livingstone meeting in Central Africa in 1871.

Livingston was a prosperous town in those days. The first known plat of the town dates from 1872, when the newly renamed town made an effort to gain county seat status during the competition between Snelling and Merced City for that honor. Peaceful and prosperous communities do not often feature events that excite historians, and this appears to be the case with Livingston. A standard encyclopedic reference to historic persons and events in California (Hoover *et al.* 1990) does not even mention Livingston and the county history (Clark 1973) contains only the information given above.

In recent years the previous emphasis of historians on early pioneers, notorious outlaws and similar colorful characters and events has been replaced to an extent by an increasing study of less spectacular events that have had a lasting effect on the people of an area. This is particularly evident in ethnic studies that examine the history peculiar to a subset of the general population that is identifiable on the basis of race, religion, national origin, or other factors. This is reflected in the most recent state historic

landmark in Merced County, which commemorates the temporary camps where Japanese-Americans were interned while the major camps, such as Manzanar, were under construction. One of these was in Merced.

In this area of historical research the Livingston vicinity is historically important. The Yamato Colony, occupying most of the land between Livingston and Cressey, may be the most significant example of an ethnic agricultural cooperative in the state. The following information is from *A History of Japanese Americans in California* (Waugh, Yamato and Okamura 1980).

Kyutaro Abiko was worried about the status and image of Japanese-Americans at about the turn of the century. Financially downtrodden, in most cases, the urban population often led lives that Abiko considered dissolute and non-productive. He felt that the future of his countrymen in the U.S. was in agriculture, which most of them had practiced in Japan. In 1904 Abiko bought 3,000 acres near Livingston, divided it into 40 acre plots and began advertising in Japanese language newspapers for families interested in becoming part of the Yamato Colony.

Initial progress was slow. The first issei, Tajiro Kishi, did not settle on the land until late in 1906. By 1908 there were only 30 individuals in the colony and they were practically starving as they labored to clear the land, develop orchards and vineyards and control the rabbits that welcomed the new food sources. Still, progress was made. The first buying cooperative was established in 1910 and a marketing cooperative followed in 1914. The first packing shed dated to 1917.

It is sometimes asserted that the colony was set up as a Christian colony from the start. Although Abiko and many of the early colonists were Christians, this was not a requirement for participation in the colony. Still, Livingston may be the only California community with a large Japanese population that has never had a Buddhist church. The Japanese Methodist church erected on land donated by Abiko has since merged with the general Methodist church of Livingston.

Another unusual feature of the colony is that the farmers stuck strictly to farming and did not set up grocery stores, laundries, etc. in the city, as was common in most other Japanese-American population centers. This seems to have derived from a tacit understanding that the less direct competition with Euro-Americans the less chance of racial hostility.

The colony managed to survive the internments of the World War II era by continuing the communal approach that was the original basis of the colony. Fifty-four families combined to hire an overseer to take care of their properties while they were incarcerated. After the war, many of the Issei pioneers, embittered by the whole experience, turned over farming operations to the Nisei generation. Another result of disillusionment with the government and with the hardship of farming is that over 60% of the residents in 1980 had college degrees and most of the younger generation had left the colony to work in other occupations. Both sons and daughters were encouraged by their parents to follow this course. The colony, though still active, is not exclusively Japanese-American anymore. The members in the late 1970s included a Chinese-American, a Mexican-American and six Euro-Americans, as well as 57 Nisei.

Conclusions

There is no information on specific archeological resources in the immediate vicinity of Livingston. From the negative results of the several surveys that have been conducted in the area, we can infer that this area was probably never a prehistoric population center (it is far enough from the river to be an unlikely site for a major village) and the relatively minor sites that probably existed in the area at one time have been largely destroyed by the extensive agricultural operations of the historic era.

Turning to historic resources, the CalTrans studies hold out little probability of architecturally important historic structures. In addition, the gap that is the current SH 99 divides the older section of town in two, limiting the possibility of defining a coherent district with historical character. The Yamato Colony is certainly the most important historical theme for this area, but except for a packing shed and an office, the physical features related to the colony are outside of town. To date, no significant historical resources have been recorded in the City of Livingston.

The absence of known cultural resources in the area leaves the process of developing a general plan free from prior restraints in this regard. This provides the citizens of Livingston with an opportunity to decide for themselves what, if anything, should be preserved, commemorated or enhanced to reflect their common history. The degree of local interest and the focus of the interest should be identified during the public participation phases of this project. There may be interest in retaining the current appearance of a section of the city, there may be interest in commemorating the Yamato colony in some manner or there may be concerns that cannot be anticipated from the sparse available information.

2.7 NATURAL AND AGRICULTURAL RESOURCES

2.7.1 Water Resources in the Study Area

The primary surface waters in the vicinity of Livingston area include the Merced River and numerous canal branches that service local croplands. The Merced River flows to the southwest north of the Livingston urban area.

2.7.2 Water Quality Conditions in Major Water Courses in Study Area.

The only natural water way in the planning area is the Merced River. Headwaters of the Merced river are in the upper reaches of Yosemite National Park, and it flows into the San Joaquin River about 15 miles west of the study area.

The stream flows vary considerably in the Merced river in the study area. This variation of flow is due to both seasonal runoff and diversion for irrigation. The quantity is controlled to a large extent by Exchequer Dam which is located about 35 miles upstream.

Water quality of the Merced River is influenced primarily by land uses in the watershed especially agricultural tail water discharges and the seasonal variation in river flow which influences turbidity,

and electrical conductivity. Quality is also influenced by discharges of the wastewater treatment plant, which contributes to increases of biological loading and turbidity.

2.7.3 Summary of Existing Descriptions of Soils in Study Area

As described by the U.S. Soil Conservation Service, most of the soils in the Livingston area fall primarily into the Delhi series. Soils of the Delhi are on a broad alluvial of the Merced River. The fan is comprised of sand and silt that re-derived almost entirely from granitic alluvium. The Delhi soils are deep and are excessively drained to somewhat excessively drained.

Agricultural soil capacity is classified according to a number of criteria including prime farmland, farmland of statewide importance and unique farmlands. The U.S. Department of Agriculture Soil Conservation Service defines these farmlands as:

Prime farmland is land best suited for producing seed, feed, forage, fiber and oilseed crops and also available for these uses (the land could be cropland, pasture land, rangeland, forest land or other land but not urban built-up land or water). It has the soil quality, growing season and moisture supply needed to produce sustained high yields of crops economically when treated and managed, including water management, according to modern farming methods.

Farmland of statewide importance is land other than prime farmland that has a good combination of physical and chemical characteristics for production of food, feed, forage, fiber and oilseed crops available for these uses (the land could be cropland, pasture range land forest land or other land, but not urban built-up land or water).

Unique farmland is land other than prime and farmlands of statewide importance that is used for the production of specific high-value food and fiber crops. It has the special combination of soil quality, location, growing season and moisture supply needed to produce sustained high quality and/or high yields of a specific crop when treated and managed according to modern farming methods. Examples of such crops are citrus, olives, cranberries, fruit and vegetables.

Delhi soils are considered prime soils or land of statewide importance for agricultural purposes. Figure 2-7 depicts the distribution of soil types in the project area. The Delhi soils do not have any major limitation for normal building activities.

There are no significant mineral resources or mining operations in Livingston.

The Livingston area is depicted in the *State Geologic Report* as located near an area of generally high subsidence and expansive soils. The nearest known subsidence occurred about twelve miles northeast of the City.

Surface ruptures from faulting, slope stability, landslides, mudslides and seismically induced waves such as tsunamis and seiches are not considered serious threats to life or property within the planning area.

Ground failure in the form of landslides is not a major concern because of the lack of steep slopes in the area. Liquefaction or subsidence may occur in water-saturated or poorly consolidated soils. The lack of fault traces in the area eliminates ground displacement as a seismic concern. The only potentially disastrous result of a major seismic event would occur if a dam upstream of Livingston failed due to ground shaking, displacement or immense seiches. Livingston is designated as being within the inundation area of the Exchequer and McSwain Dams.

2.7.4 Identification of Location and Amount of Ag Land Within the Study Area

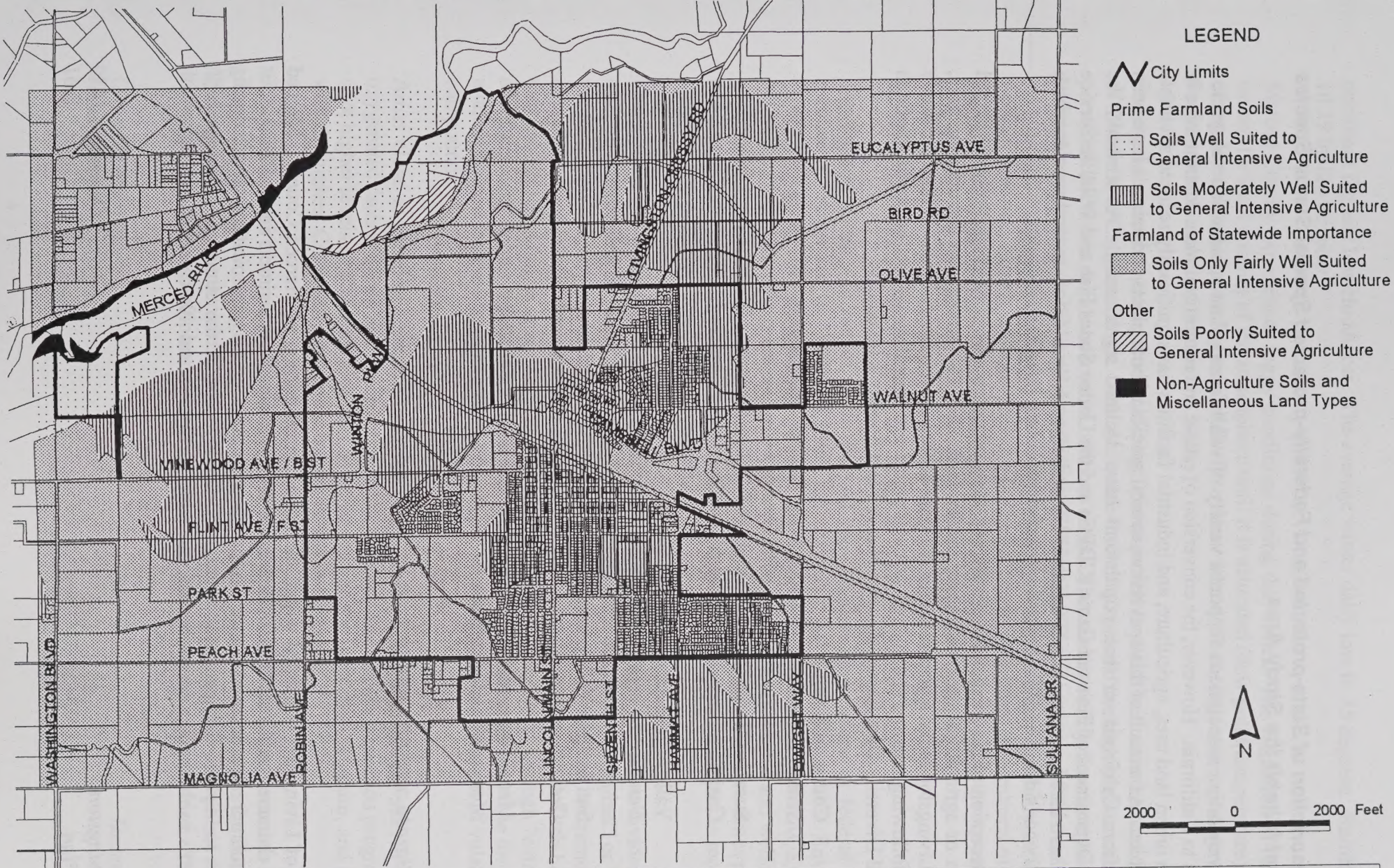
The dominant land use around the city limits is agricultural. Single family homes occupy many parcels at rural densities. Farm sheds and other appurtenant structures are also present. Ag surface waters are conveyed via Merced Irrigation District canals.

2.7.5 Description of General Wildlife Habitat Within The Study Area

Historically, the natural vegetation of the Livingston area was characterized by vast stretches of savanna traversed by the riparian stands of the Merced River its tributaries. The range of natural vegetation communities has been significantly reduced from historic levels as a result of conversion of these lands to urban and agricultural uses. Only scant disturbed remnants of these natural communities remain in the Livingston area. Agricultural and suburban development have all but eliminated most historic natural communities.

The agricultural community surrounding the City of Livingston consists of both large and small farms. Orchards and row crops dominate the ag land uses with some pasture or open land.

Although there is no prime habitat in the Study Area, croplands in the area can provide a source of food, water, and shelter to both native and introduced wildlife species. The lack of hedgerows, shelter-belts, wind breaks, and natural vegetation buffers severely limits the habitat value of these man-made environs. In addition, agricultural practices such as herbicide and pesticide application, monocultural cropping, and intensive tillage further reduces the habitat value of these lands.



2.7.6 Description of State-protected and Federally-protected Special Status Species That Inhabit the Study Area

The local vegetation associations support a variety of wildlife and plant species and subspecies indigenous to California. However, the conversion of native and naturalized plant communities in the State to urban land uses, agriculture, and industrial facilities has significantly reduced available wildlife habitat. As a result of this conversion, several species of both plants and animals have been displaced from California, or their populations have declined significantly. As a result, the California Department of Fish and Game (CDFG) and the United States Fish and Wildlife Service (USFWS) have listed some species as threatened or endangered. In addition, several species which are currently considered candidates for State or federal listing have been included.

With the exception of the Merced River environs, the Livingston area is almost entirely developed with urban or agricultural uses. Some migratory birds do pass through the surrounding area, however, Livingston is not a year-round or seasonal habitat for migratory birds. Within the Study Area, the following rare and endangered vascular plants and animals have been identified through the Natural Diversity Data Base/California Native Plant Society's Inventory:

Common Name Scientific Name	Federal/ State Status
Succulent Owl's-Clover <i>Castilleja campestris</i> spp. <i>succulenta</i>	Threatened/ Endangered
Valley Elderberry Longhorn Beetle <i>Demoscerus californicus dimorphus</i>	Threatened/ None
San Joaquin Valley Orcutt Grass <i>Orcuttia inaequalis</i>	Threatened/ Endangered
Merced monardella <i>Monardella leucocephala</i>	Threatened/ Endangered

2.7.7 Climate and Air Quality

Climate

The City of Livingston is located within the north-central portion of Merced County. Merced County is characterized by an "inland Mediterranean" type climate; the winters are cool and moist and the summers are dry and warm. Approximately 85% of the precipitation occurs during November to April. Temperatures average in the low 90s in the summer. Average high temperatures in the winter are in the 50s, but highs in the 30s and 40s can occur on days with

persistent fog and low cloudiness. The average winter daily low is 45 degrees. Rainfall averages 10.29 inches per year.

Merced County experiences foggy conditions during the winter. The formation of natural fog is caused by local cooling of the atmosphere until it is saturated (dew point temperature). This type of fog, known as radiation fog is more likely to occur inland. These fogs are more severe and persist longer in the lower elevations of the Valley.

During the summer months, the Pacific high pressure cell is positioned over the ocean to the west of the northern California coast. The clockwise flow of air around the high-pressure cell results in persistent northwest winds over most offshore areas. This northwesterly flow is enhanced by the thermal trough through the interior valleys of California. The orientation of this trough and the pressure gradient between coastal and inland stations determines the variability in the summer weather pattern. Strong onshore pressure gradients occur with deep penetrations of marine air through the Carquinez Strait area (the only sea level channel through the coast). Cooler temperatures and stronger up-valley winds result from this distribution.

Federal Air Quality Regulations

The Federal Clean Air Act of 1970 (FCAA) was the first major piece of federal air quality regulation. Amended in 1977 and 1990, the Clear Air Act required the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) for several pollutants. These standards are set by law at levels that protect public health and welfare, with an adequate margin of safety. Areas exceeding the federal standard more than two times per year are designated "non-attainment" areas under the Clean Air Act, and as such are subject to more stringent planning and pollution control requirements.

Under the 1990 amendment to the Clear Air Act, non-attainment areas are divided into five categories depending on future dates identified for meeting the standards. "Marginal" or "moderate" violators only slightly exceed the NAAQS, whereas "serious," "severe," or "extreme" violators exceed the standards by a much higher margin. Marginal areas are required to do little beyond what they are already doing to attain clean air, but areas designated "moderate" through "extreme" must adopt gradually tighter regulations. States with areas designated "moderate" or worse for ozone non-attainment area required to show a three percent per year reduction in emissions of volatile organic compounds.

Areas close to meeting Carbon Monoxide (CO) standards are required to start a wintertime oxygenated fuels program and to correct problems with existing vehicle inspection programs. Areas with higher levels of CO must also start an enhanced vehicle inspection program, and those areas with the highest CO levels must adopt transportation measures.

The FCAA requires an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measure California will use to attain the NAAQS. The Federal Clean Air Act Amendments of 1990 require states containing areas that violate the NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is to

be periodically modified to reflect the latest emissions inventories, planning documents, rule and regulations of air basins as reported by the agencies with jurisdiction over them. The EPA reviews SIPs to determine if they conform to the mandates of the FCAA and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the non-attainment area and may impose additional control measures.

State Regulations

In 1988, the California Clean Air Act (CCAA) (AB 2595) was passed. The act contains more stringent guidelines for the attainment of air quality goals than the FCAA. The California Air Resource Board (ARB) is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA. The CCAA classifies non-attainment areas as moderate, serious, severe, and extreme based on severity of violation of state ambient air quality standards. Both the State of California and the federal government have established a variety of ambient air quality standards. The state 1-hour ozone standard is 0.09 ppm (parts per million, by volume), not to be equaled or exceeded. The federal 1-hour ozone standard is 0.12 ppm, not to be exceeded more than 3 times in any 3-year period.

San Joaquin Valley Unified Air Pollution Control District

The City of Livingston lies within the Merced County portion of the San Joaquin Valley Air Basin (SJVAB). The San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) was organized in 1991 by a Joint Powers Agreement of eight Valley counties. The District is the local lead agency for formulating Federal and State Air Quality plans, promulgating rules that affect a variety of air pollution sources, and reviewing local governments' land use plans and development proposals in order to estimate projected air quality impacts and suggest methods reducing those impacts. Headquartered in Fresno with regional offices located in Bakersfield and Modesto, the San Joaquin Valley Unified Air Pollution Control District has jurisdiction over air quality matters in the San Joaquin Valley Air Basin.

The SJVUAPCD has adopted several attainment plans in an attempt to achieve state and federal air quality standards; the *1991 California Clean Air Act Quality Attainment Plan (AQAP)* for ozone and carbon monoxide, the *1992 Federal Attainment Plan for Carbon Monoxide*, the *Ozone Attainment Demonstration Plan*, and the *PM₁₀ Attainment Demonstration Plan*. The *Ozone Plan* demonstrates that the federal ozone standard will be met by 1999. The *Carbon Monoxide Plan* demonstrates that CO attainment has already been reached. The *PM-10 Attainment Plan* sets forth the approach the SJVUAPCD will use to attain the NAAQS for PM-10 by the end of 2006 as prescribed by the EPA.

2.7.8 Air Quality Monitoring Data

The San Joaquin Valley's air quality has been designated nonattainment by the EPA and by the Air Resources Board (ARB) for ozone and PM-10. The urbanized areas of Fresno, Bakersfield, Stockton, and Modesto are classified attainment and all the non-urbanized area of the SJVAB are classified as "unclassified" for federal carbon monoxide standards. Air quality in the project area is best represented by air monitoring data collected by the State of California Air Resources Board

at two monitoring stations located in Merced on Coffee Street and at the County Health Department in Merced County where PM-10, O₃, and NO₂ are monitored.

Oxides of Nitrogen (NO_x) and Nitrogen Dioxide (NO₂)

NO_x is a family of gaseous nitrogen compounds and are precursors to ozone formation. The major component of NO_x, nitrogen dioxide (NO₂), is a reddish-brown gas that is toxic at high concentrations. NO_x results primarily from the combustion of fossil fuels under high temperature and pressure.

Health effects associated with NO_x are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO₂ may lead to eye and mucus membrane aggravation, along with pulmonary dysfunction. NO_x can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to production of particulate nitrates.

Ozone (O₃)

Ozone is highly reactive secondary gas pollutant which is toxic, colorless and has a pungent odor. Ozone is photochemically produced through complex chemical reactions of certain hydrocarbons and oxides of nitrogen (primary pollutants) in the presence of sunlight and temperatures above 59°F. In high concentrations, ozone and other photochemical oxidants are directly detrimental to humans causing respiratory irritation and possible alterations in the functioning of the lungs and inhibits vegetation growth.

Ozone is a regional air pollutant. It is generated over a large area and is transported and spread by wind. The worst ozone concentrations tend to be found downwind from emission sources in Valley metropolitan areas. Ozone has been the San Joaquin Valley's most obstinate air quality problem.

Particulate Matter (PM₁₀)

PM₁₀ refers to particulate matter equal to or less than 10 microns in diameter. This material, as opposed to dust, cannot be adequately filtered by the human respiratory system. Inhaled atmospheric particulates can, therefore, be harmful to humans by directly causing injuries to the respiratory tract and lungs or by the reactive gases which were absorbed by the inhaled particulates. Suspended particulates scatter and absorb sunlight, producing haze and reducing visibility. In areas close to major sources including industrial and agriculture operations, PM₁₀ are generally higher in the winter when more fuel is burned and meteorological conditions favor buildup of directly emitted contaminants.

The actual composition of PM₁₀ varies greatly with time and location. It depends on the sources of the material and meteorological conditions. Primary man-made sources of PM₁₀ in the San Joaquin Valley are agricultural operations, agricultural burning, demolition and construction activities, entrainment of dust by motor vehicles on paved and unpaved roads, and residential wood burning. Wind erosion of agricultural land also represents a significant source of air borne dust in the Valley.

Based on air quality data for 1996, ozone pollutants exceeded federal standards 1 day and state standards 44 days. PM-10 pollutants exceeded state standards 4 out of 46 days and federal standards were not at exceeded. Note however, because PM-10 is monitored only once every six days rather than continuously, actual exceedances of the standards on a daily basis may be up to six times higher than the numbers shown. No standard violations were observed in Merced County for nitrogen dioxide.

2.8 SAFETY

2.8.1 Identification of Geologic and Seismic Hazards

The San Joaquin Valley is a structural trough, whose main axis trends northwest-southeast. The San Joaquin Valley is bordered on the east by the granitic complex of the Sierra Nevada and on the west by the folded and faulted sedimentary, volcanic, and metamorphic rocks of the Coast Range. The relatively flat floor of the San Joaquin Valley overlies thousands of feet of alluvial, lacustrine and marine deposits that have accumulated in the valley as the trough has been lowered and the adjacent mountains have been elevated.

Throughout Late Cretaceous and much of Tertiary time, the San Joaquin Valley was the site of marine deposition, and thousands of feet of shallow-water marine sediments were deposited in this geosyncline. Presently overlying these marine sedimentary deposits are continental deposits of late Tertiary and Quaternary age. In aggregate, these marine and continental deposits form an immense wedge that thickens from east to west and from north to south. The continental deposits have been tilted to the west and down warped, and their base is now several hundred to many thousand feet below sea level.

The low alluvial plains and fans in the Valley floor are relatively flat and featureless, occupying most of the floor's area. The extensive fans along the eastern margin of the Valley contain high proportions of well-sorted gravel and sand, while the interstream areas between the fans are underlain by poorly sorted, fine-grained fluvial sediment deposited by intermittent streams.

Livingston is situated near the center of the San Joaquin Valley. The topography of this portion of Merced County is typical of the relatively flat gradient encountered throughout the San Joaquin Valley, with uniform northeast to southwest trending slopes. The average elevation of Livingston is 125 feet above sea level. The only significant topographic features within the immediate vicinity of the City are the numerous irrigation canals and sloughs traversing the area from the northeast branching outward to the southwest.

There is no record of seismic activity in the Livingston area and no faults have been mapped near Livingston. The maximum expectable earthquake intensity of the area is listed as "Low" in the *Urban Geology Master Plan* prepared by the California Division of Mines and Geology. Minor faulting has occurred along the eastern margin of the San Joaquin Valley. These minor faults are considered to have had movement prior to Pleistocene time; however, surface expression may have been obliterated by Recent Age deposits of shifting stream courses and by agricultural development. The City's mild topography and low elevation negate threats of landslides, liquefaction, settlement

or other seismically related hazards. Numerous canals, levees and other earthen water-containment structures within and near the City may pose potential flooding hazards to property and residents of Livingston.

The City is located between the two major fault systems in Central California – the San Andreas Fault System and the Mother Lode Fault System. The San Andreas, along with its associated Calaveras and Hayward Faults, is located 59 miles west of Livingston, and the Mother Lode Fault System is located 42 miles to the east.

Seismic Hazards - The most serious direct earthquake hazard is the damage or collapse of buildings and other structures by ground shaking. Ground shaking is the vibration which radiates from the epicenter of an earthquake. Damage to structures from ground shaking is caused by the transmission of earthquake vibrations from the ground into the structure. The intensity of the vibration or shaking and its potential impact on building and other urban development is determined by several factors:

- ▶ The nature of the underlying materials, including rock and soil;
- ▶ The structural characteristics of a building;
- ▶ The quality of workmanship and materials used in its construction;
- ▶ The location of the epicenter and the magnitude of the earthquake; and
- ▶ The duration and character of the ground motion.

Older buildings constructed before building codes were in effect, and even newer buildings constructed before earthquake resistance provisions were included in building codes, are the most likely to suffer damage in an earthquake. Most of Livingston's buildings are one or two stories high and are of wood frame construction, which is considered the most structurally resistant to earthquake damage.

Older masonry buildings without earthquake-resistant reinforcement are the most susceptible to the sort of structural failure which causes the greatest loss of lives. The susceptibility of a structure to damage from earthquake ground shaking is also related to the foundation material underlying the structure. A foundation of rock or very firm material intensifies short period motions which affect low-ridged building more than tall, flexible ones. A deep layer of soft alluvium may cushion low-ridged buildings, but accentuate the motion in tall buildings. The amplified motion resulting from softer alluvium soils can also severely damage older masonry buildings. Some unreinforced masonry buildings are located in downtown Livingston. No assessment of these buildings has been made.

Other potentially dangerous conditions include building projections which are not firmly anchored, such as parapets and cornices. These projections could collapse during periods of strong and/or sustained ground shaking.

Fire is often a major form of damage resulting from ground shaking effects. Most earthquake-induced fires start because of ruptured gas lines, damage to wood, gas or electric stoves and damage to other gas or electric equipment.

2.8.2 Identification of Structural Hazards and Critical Facilities

Crossings of SH 99 have been constructed pursuant to seismic standards. Critical facilities include underground utilities. However, because there are no local faults the likelihood of damage to critical facilities during an earthquake are minimal.

2.8.3 Wildland and Urban Fire Hazards

Both structural and wildland fire hazards threaten life and property within the Livingston vicinity. Wildland fires resulting from both man-made and natural causes can occur in brush, or grasslands, primarily in sparsely developed or existing open space lands. Structures and urban development may also be threatened or destroyed in the area of ~~wildland~~ fires. Structural fires usually result from man-made causes and threaten industrial, residential and commercial structures, especially those built before building and fire codes were established. These substandard structures represent the highest potential for injury, death, or loss of property.

Under optimum conditions, the average response time to a fire in the city is about seven minutes. If a train blocks Main Street this response time can be increased ten to fifteen minutes.

Hazardous cargoes are regularly transported through Livingston via truck on SH 99 and via rail. The types of cargoes transported by road or railroad include flammable liquids, corrosive materials, compressed and/or poisonous gases, explosives, flammable solids, irritating materials, radioactive materials, etc. The transportation of such cargo creates some obvious potential hazards for existing and proposed land use adjacent to those transportation routes.

2.8.4 Areas Subject to Flooding and Dam Failure Inundation

According to the 1990 Merced County General Plan, areas subject to inundation during a 100-year flood are restricted to the flood plain of the Merced River. Facilities in this area include portions of the two public wastewater treatment facilities (Figure 2-6). Excluding these areas City staff notes that seasonal flooding of the urban area due to rainfall is minimal due to the development of storm water collection, detention and removal facilities.

The Merced County General Plan notes that the area subject to inundation from the failure of the dam at McClure reservoir includes the entire General Plan study area.

2.9 NOISE

The principal noise source in the City of Livingston is traffic on Highway 99 and local roads. Other sources are the Union Pacific Railroad and industries. The existing noise environment in the City of Livingston was determined by a combination of noise level measurements and noise modeling. Following is a discussion of the background noise level survey results in residential areas of the City, and a description of the studied noise sources in the City.

2.9.1 Background Noise Level Survey

The purpose of the background noise level survey was to determine the base-line noise environment in those parts of the City that are removed from obvious noise sources, such as busy roadways. Three residences were selected for the survey. Their locations are shown in Figure 2-8. Noise measurements were conducted continuously for 24 hours using unattended sound level analyzers situated in the backyards of the residences. The results of the monitoring are shown in Figures 2-9, 2-10 and 2-11.

The background noise levels in terms of the Day/Night Average Level (L_{dn}) at the three residences ranged from about 50 to 55 dB. These are typical noise levels in suburban residential neighborhoods. The highest hourly noise levels occurred in the early evening. The lowest levels were in mid-afternoon and in the early morning.

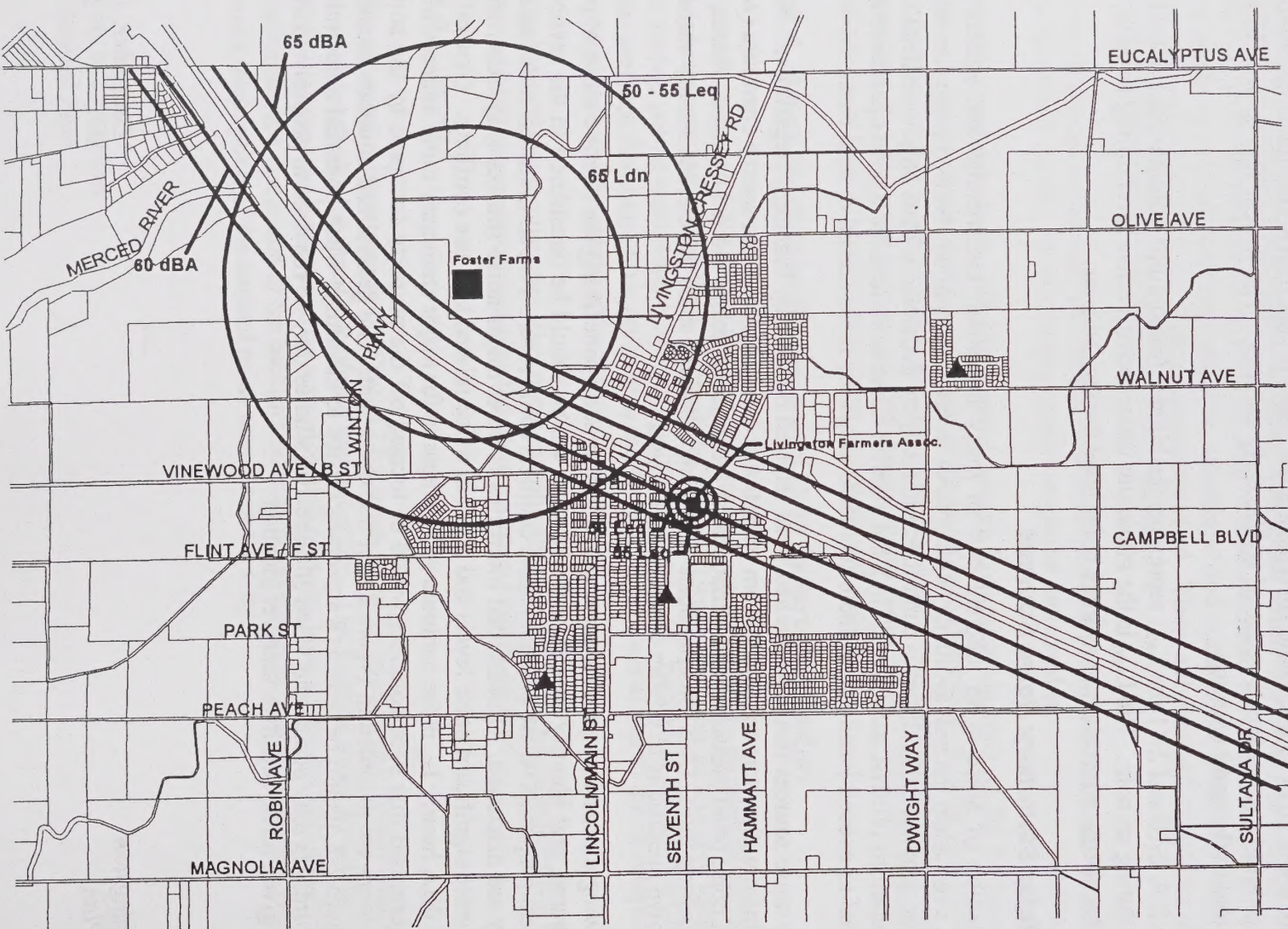
In Figures 2-9, 2-10 and 2-11 the L_{max} represents the highest (maximum) instantaneous noise level occurring during an hour. The L_{min} is the minimum instantaneous noise level during an hour, and the L_{eq} is the energy equivalent or average noise level during the hour.

2.9.2 Major Stationary Noise Sources

The production of noise is an inherent part of many industrial, commercial and agricultural processes, even when the best available noise control technology applied. Noise production within industrial or commercial facilities is controlled indirectly by Federal and State employee health and safety regulations (OSHA and Cal-OSHA), but exterior noise emissions from such operations have the potential to exceed locally acceptable standards at nearby noise-sensitive land uses.

Stationary noise sources that were studied were selected by the City Planning Department. Noise exposure information was developed from operational data obtained from source operators (when available), noise level measurements conducted at reference locations around the noise source, and BBA file information. Only existing noise levels are described since there are too many variables and unknown conditions to predict future noise exposure.

The following discussions provide generalized information concerning the relative noise impacts of each source, and identify specific noise sources which should be considered in the review of development proposals where potential noise conflicts could result. Not all industrial noise sources in the City are discussed. Unidentified industries or other major noise sources may exist, which could generate significant noise levels and result in noise-related land use conflicts. Generalized 50 and 55 dBA hourly L_{eq} noise contours were prepared for major stationary noise sources where it was determined that such contours would be located off the property occupied by the source. These contours are included in Figure 2-8 of this document. The generalized contours contained within Figure 2-8 should be used as a screening device to determine when potential noise-related land use conflicts may occur, and when site-specific studies may be required to properly evaluate noise at a given noise-sensitive receiver location.

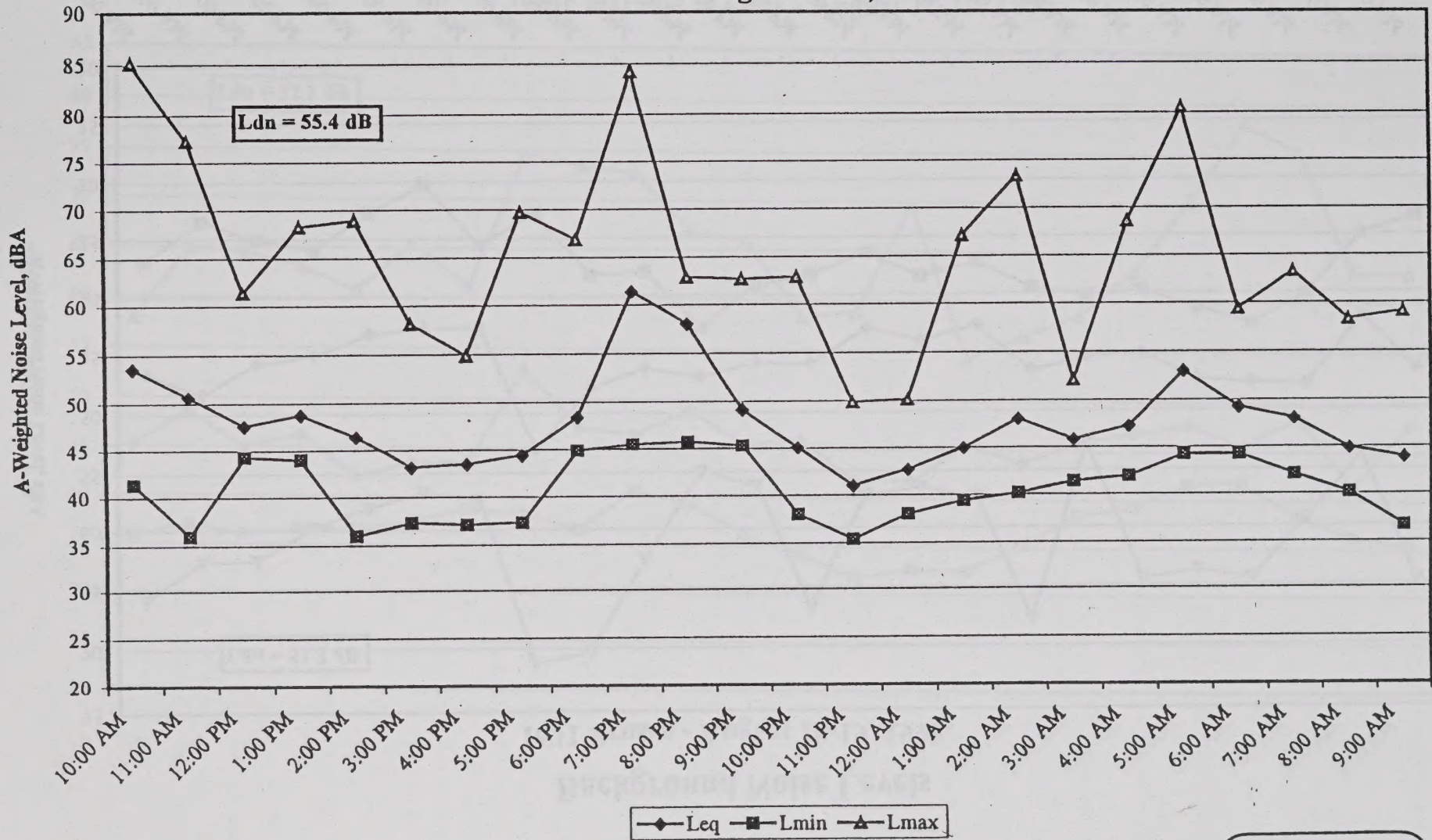


- LEGEND
- Industrial Site Location
 - ▲ Noise Measurement Location

Noise Measurement Locations
and Existing Noise Contours

Figure 2-8

Figure 2-9
Background Noise Levels
1006 5th Street - August 18-19, 1998

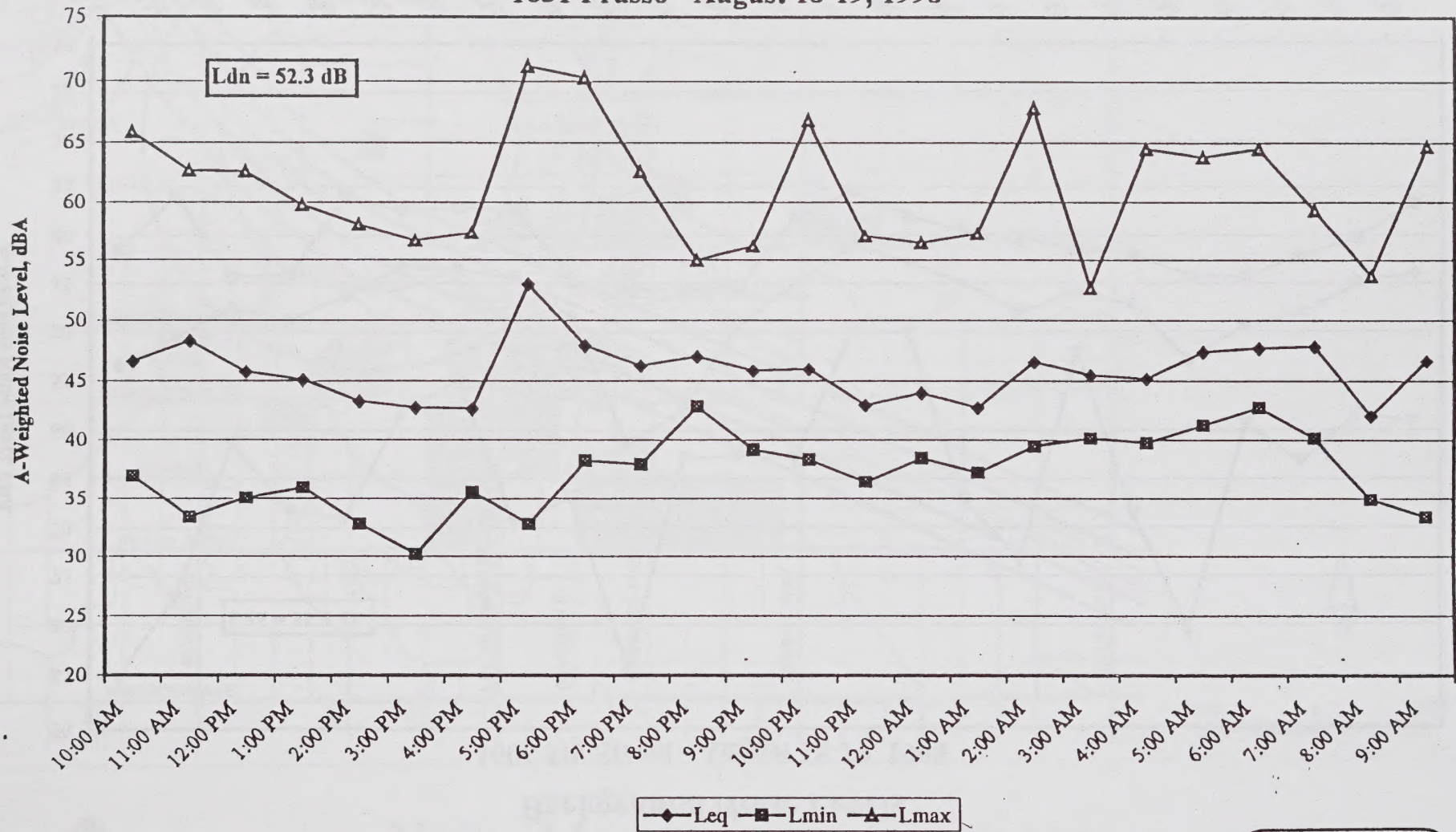


BBA

Figure 2-10

Background Noise Levels

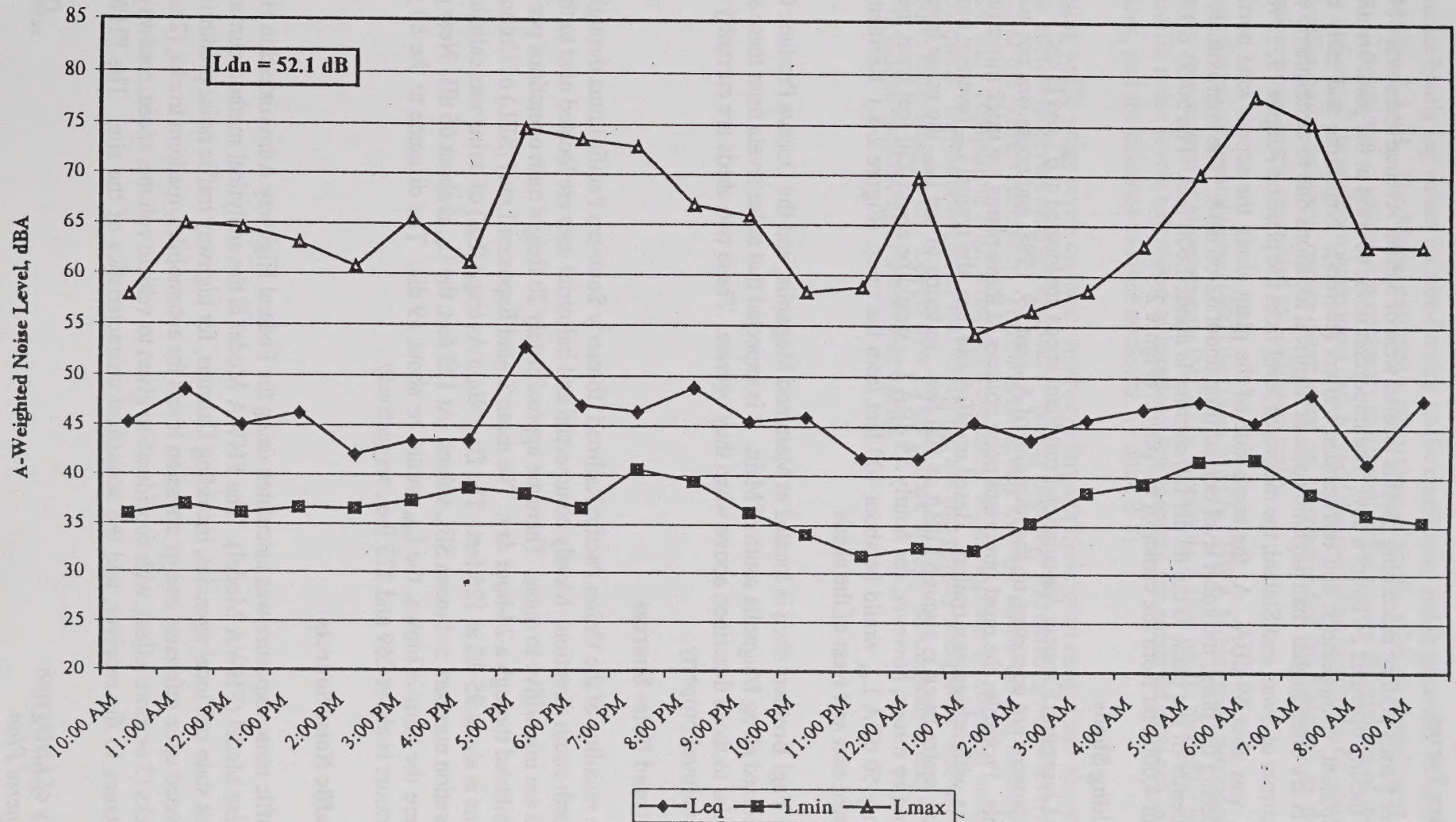
1631 Prusso - August 18-19, 1998



BBA

Figure 2-11

Background Noise Levels Near Harvest & Olds - August 18-19, 1998



BBA

Foster Farms

Foster Farms poultry processing plant is located west of Stefani Avenue and south of Olive Avenue. The facility operates 24 hours a day. The important noise sources at the plant are air conditioning equipment, compressors, and refrigerated trailers (reefers). Nighttime and early morning noise levels are often higher than daytime noise at identical locations due to atmospheric conditions. At the corner of Swan and Stefani, the measured level from the plant on August 19, 1998 at about 7:30 a.m. was about 59 dBA. At the north side of the plant along the access road north of the canal bordering the plant, the noise level ranged from about 62-66 dBA. The approximate distance from the center of the plant to the 65 dB L_{dn} contour is about 2,600 feet. The 50-55 dBA hourly L_{eq} is about 4,000 feet from the center of the plant. (Figure 2-9).

Packing Sheds

The Livingston Farmers Association Fruit Plant sheds are located at 6th and D and 7th and D. These plants were not operating on the morning of August 19, 1998, and noise was not audible from the plants. Probably, the most important noise sources at these plants are truck movements, including trucks with refrigerator trailers. Based on BBA file data, the typical L_{eq} (average noise level) of an idling reefer truck is about 63 dBA at 100 feet. In terms of the L_{dn} , the noise level from reefers would be minor; however, the hourly 55 dBA L_{eq} would be about 230 feet from the truck and the hourly 50 dBA L_{eq} would be about 400 feet from the truck. (Figure 2-8.) Residential housing is located east and west of the sheds.

The Yagi Brothers shed is located at Main and Magnolia, and the Doreva Produce Company shed is located along Magnolia south of Main. It is expected that noise levels from these sheds would be similar to those described above when they operate. These two sheds are currently surrounded by agricultural property.

Railroad Noise Sources

The mainline of the Union Pacific Railroad (formerly Southern Pacific) runs through Livingston in a north-south direction. Mostly commercial and industrial uses are located next to the track. These uses are insensitive to noise. There are approximately 20 freight train operations per day, uniformly distributed through a 24-hour day. The mean Sound Exposure Level (SEL) of Union Pacific freight trains is about 95 dB at 125 feet. The Day/Night Average (L_{dn}) of trains was calculated using train operation numbers and mean SEL values. At 125 feet, the L_{dn} is about 65 dB. Near grade crossings where the horn is blown, the L_{dn} would be about 69 dB. The distance to the 60 and 65 dB L_{dn} contours is about 269 and 125 feet, respectively.

Traffic Noise Sources

Traffic noise exposure was calculated using the Federal Highway Administration Highway Traffic Noise Model (FHWA Model). The FHWA Model is the analytical method currently favored by most state and local agencies, including Caltrans, for highway traffic noise prediction. The Model is based upon reference energy emission levels for automobiles, medium trucks, (2 axles) and heavy trucks (3 or more axles), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was

developed to predict hourly leg values for free-flowing traffic conditions, and is generally considered to be accurate with ± 1.5 dB. The Model assumes a clear view of traffic with no shielding at the receiver location. To predict L_{dn} values, it is necessary to determine the hourly distribution of traffic for a typical day and adjust the traffic volume input data to yield an equivalent hourly traffic volume. The Calvenno traffic noise emission curves were used as recommended by Caltrans to more accurately calculate noise levels generated by California traffic.

Traffic conditions for existing conditions (1997) that were used in FHWA Model were provided by the Merced County Association of Governments (MCAG). Appendix A lists traffic modeling input data, existing traffic noise levels calculated at locations representing the assumed distance to the nearest residences, and the distance to noise contours. (Figure 2-8)

In general, existing traffic noise levels on major roadways through Livingston range from about 62-68 dB L_{dn} at the nearest receivers on most roadways. Along Highway 99, existing noise levels are about 71 dB L_{dn} at the nearest receivers. Traffic noise levels that are 60-65 dB L_{dn} usually are considered to be fully compatible with noise-sensitive uses, which include residences, schools, churches and hospitals. Levels between 65 and 75 dB L_{dn} are marginally acceptable, and usually can be mitigated to acceptable levels. Levels over 75 dB L_{dn} are usually unacceptable, and it may not be feasible to reduce such levels to acceptable values.

CHAPTER 3

LAND USE ELEMENT

3.0

LAND USE ELEMENT

3.1 GENERAL PLAN, ZONING CONSISTENCY AND PLAN ADMINISTRATION

Objective

- A. A well-balanced mix of residential, commercial, industrial, and open space/public land uses which create and maintain a high quality environment and a fiscally sound community.

Policies, Standards

1. No development shall be approved unless it is found to be consistent with the adopted land use map and policies of the General Plan.
2. Land-use density and intensity standards are shown in the Plan Consistency Table, Table 3-1.
3. Changes to zoning shall be consistent with the General Plan. A zone district shall be deemed consistent with a land use designation when it is specified as consistent in the Plan Consistency Table. In no case, however, shall the overall maximum density of the plan designation be exceeded.
 - a. Residential density on part of a site may exceed the maximum if the entire project site density conforms with the Plan Consistency Table. Mixed residential uses and density incentives should be provided to most fully utilize properties. Such projects shall be at least two acres in size and will require a Conditional Use Permit.
4. General Plan amendments shall be processed concurrently with the appropriate rezoning and/or other appropriate special permit application.

**Table 3-1
Plan Consistency Table**

Plan Designation	Consistent Zone District	Consistent Density (In dwelling units/ gross acre)	Maximum Intensity Of Persons Per Acre
Unclassified/Reserve	Within the city limits: no consistent zone districts. Between the city limits and the Sphere of Influence: zone districts are limited to exclusive agricultural districts of Merced County		
Residential Low/Estate Density	R-1-8, R-1-6, R-1-5.5 R-M, P-D	1.0 – 7.5	38'
Medium Density	R-2, R-M, P-D	7.6 – 11.9	41.5
High Density	R-2, R-3, R-M, P-D	12 - 29	101.5
Downtown Commercial Professional Office	C-1, DTC, PO		
Community Commercial/ Neighborhood Commercial	C-2		
Service Commercial/Highway Commercial	C-3		
Limited Industrial	M-1		
General Industrial	M-2		
Open Space/Park	O		
Public	P-F		

5. The City will update the Zoning Ordinance as appropriate to implement the General Plan.

6. The Conditional Use Permit process shall be used where site conditions or project location will affect land use compatibility. Findings required for approval shall include:
 - a. The site for the proposed use is adequate in size and shape to accommodate said use and all yards, spaces, walls and fences, parking, loading, landscaping, and other features required by the applicable zone district.
 - b. The site for the proposed use is served by streets and highways adequate to carry the quantity and kind of traffic generated by the proposed use.
 - c. Public facilities are currently adequate to serve the proposed use or improvements are included in an approved Capital Improvement Plan or otherwise will be complete prior to the issuance of building permits.
 - d. The proposed development is consistent with the General Plan land use map and policies.
7. The Reserve classifications (Urban, Commercial, Industrial, Park and Public Facility) denote the following:
 - a. Lands not anticipated to develop within the 2020 time frame of the General Plan, but which bear relation to Livingston's long range planning;
 - b. Lands that possess urban service constraints within the 2020 urban growth boundary; or
 - c. Park Reserve indicates a general area, typically bounded by major streets, for which a park is planned, but a specific location has not yet been determined. Until a site has been selected, the land use designation underlying Park Reserve shall prevail.

Lands designated as Reserve may not be developed without first amending the General Plan, demonstrating a need for development in these areas, and demonstrating that urban services can be provided without adversely affecting the development feasibility of lands currently planned and zoned for urban uses.
8. When an annexation is requested any necessary plan amendments and zoning applications for the subject property shall be processed concurrently.
9. Funding for the development and maintenance of private and public improvements shall be established to ensure that necessary infrastructure and public facilities are provided when needed.
10. Exterior area lighting for non-residential land uses, shall be shielded to prevent line of sight visibility of the light source from abutting property planned for single-family residential.
11. In order to ensure orderly and logical urban growth, to maintain the integrity of surrounding agricultural activities, and provide for urban growth in areas with proper services, the Reserve classifications are designated on the General Plan map. Activities within this designation are limited to those uses permitted by the exclusive agricultural zone districts of Merced County.
12. Project descriptions for Site or Plot Plans shall identify:

quality of design in such areas as access, circulation, building placement, parking, provision of adjacent open space, and architectural compatibility with the surrounding area.

4. Manufactured and modular housing developments shall be permitted subject to design regulations and existing ordinances.

Objective

- B. Promote stable, high quality residential neighborhoods.

Policies, Standards

1. Multi-family residential developments with more than 25 units shall have direct access to a collector or arterial street.
2. Development standards for the interface between multi-family residential and single-family residential shall be as follows:
 - a. Outdoor recreational areas, game courts, pools, and solid waste collection areas on multi-family properties shall be oriented away from adjacent properties planned for single family residential.
 - b. Multi-family parking areas, garages, other structures, and access drives shall be separated from adjacent properties planned for single family residential with 10-foot landscaped setback containing deciduous and evergreen trees.
 - c. Multi-family buildings greater than 15 feet in height shall be prohibited within 25 feet of abutting property planned for single-family residential. An additional 10 feet of setback shall be required for each additional story.
3. Where new residential development is proposed that adjoins existing commercial/agricultural or industrial development, the residential developer shall be required to provide an architectural transition. This transition may include such provisions as building setbacks, landscaping and masonry wall requirements to benefit future residents.
4. Site development techniques should be encouraged which ensure a mix of housing types throughout the Community.
5. In order to encourage infill development, flexible design standards should be developed which meet the intent of the General Plan.
6. Where feasible, multi-family developments should be located near commercial and community services.
7. Multi-family developments shall use more intensive landscaping. Block walls adjacent to the public right of way shall be discouraged unless they are found to be necessary for public health and safety.

3.3 COMMERCIAL LAND USE

Objective

- A. Ensure the provision of adequate commercial shopping opportunities and office space locations to meet anticipated needs.

Policies, Standards

1. Establish the following commercial land use designations:
 - a. Neighborhood Commercial. The neighborhood commercial land use designation provides for a maximum of 10 acre grouping of commercial establishments serving the everyday convenience goods and personal service needs of a defined neighborhood. The service radius of a neighborhood commercial use is generally 1/2 mile.
 - b. Community Retail Commercial. The community commercial land use designation provides for no less than a 10-acre or larger grouping of commercial establishments serving needs similar to the neighborhood commercial centers, but serves a market area within ten miles. Such facilities should be located in each residential quadrant of the community to minimize cross-town traffic.
 - c. Downtown Commercial. This designation provides the City with a mixed-use activity in the downtown area. It is intended to provide for a wide range of uses and to promote feasibility and vitality of downtown. Professional office land uses are permitted to allow construction of new office unified centers, and the redevelopment of existing areas to office use.

This designation also provides for office development, which includes medical, dental, law, or other professional offices. Commercial uses contemplated as part of this category include business support services and support restaurant and medical services.
 - d. Service Commercial designates land for commercial activities in which the function performed is of equal or greater importance than the product traded. The Highway Commercial subcategory allows Service Commercial uses which, due to space requirements, the proximity to the highway, or the distinctive nature of their operation, are not compatible with or not usually located in other commercial designations.
2. Neighborhood Commercial sites should be located at or near the intersection of collector and/or arterial streets with a minimum of overlap with other existing or planned neighborhood commercial uses. Only one neighborhood commercial development may be

permitted at any one intersection. Such developments should also be directly accessible from adjacent residential developments.

3. Community Commercial uses should be located along major traffic ways in consolidated centers that utilize common access and parking for commercial uses. Strip commercial uses are to be discouraged. Adequate pedestrian links to residential areas shall be required.
4. The Downtown Commercial designation is used in the downtown area in order to attract and accommodate growth, which includes commercial, financial, office, and governmental uses.
5. Conversion of existing residential units is discouraged adjacent to the downtown.
6. Commercial and office site planning shall be compatible with the surrounding neighborhood, signage, and landscaping.

Objective

- B. Provide for the compatible integration of residential and commercial uses.

Policies, Standards

1. Development standards for the interface between commercial or office uses and residential uses shall be as follows:
 - a. A landscaped setback of at least ten feet wide containing deciduous and evergreen trees shall be planted and maintained along the property line between commercial and office uses and residential properties that have a common property line.
 - b. A masonry wall six feet in height, shall be erected along the property line where commercial and office uses have a common property line with residentially designated properties.
 - c. A masonry wall three and one-half feet in height, shall be erected along the setback line ten feet from the parallel with local streets abutting planned residential uses.
 - d. All commercial loading and storage areas shall be screened from view of adjoining residential property by a combination of landscape planting and a masonry wall. Loading areas shall be enclosed and be located so that there are no noise impacts to adjacent residential properties. All storage shall be within an enclosed structure.
 - e. Roof-mounted and detached mechanical equipment shall be acoustically baffled to prevent noise from the equipment from exceeding 55 dB (A) measured at the nearest residential property line.

- f. Exterior area lighting for non-residential land uses, shall be shielded to prevent line of sight visibility of the light source from abutting property planned for single-family residential.
2. In order to encourage the integration of neighborhood and community commercial uses into neighborhoods, designs should de-emphasize the usage of walls as buffers where they create barriers to pedestrian access. Continuous block walls shall be discouraged and offsets, landscaping pockets and openings shall be encouraged.
3. In order to ensure continued viability of the downtown as the civil center of the city, urban development shall be directed so that the downtown remains the approximate geographic center of the community.

3.4 INDUSTRIAL LAND USE

Objective

- A. Promote industrial sites which are functional, have adequate public services, and have access to major streets and railroads.

Policies, Standards

1. Establish the following industrial land use designations:
 - a. Limited Industrial. This category establishes light industrial areas where uses such as fabricating, assembly, research and development, electronics, low intensity warehousing and other such similar industrial uses are appropriate. All work, materials, and equipment storage is generally conducted indoors. Light industrial is appropriate as a buffer between heavy industrial and non-industrial uses and where the site is visible from residential areas or major streets. Special landscaping, enclosures and other site development standards should be used. Industrial park development is intended on larger parcels to create distinct districts of industrial, office, and support uses. The industrial park area shall have high quality landscaping, architectural designs, and general site development requirements.
 - b. General Industrial. Heavy industrial allows for a range of activities including manufacturing, wholesale distribution, large storage areas and other non-hazardous industrial uses. Areas developed under this designation should be located with direct access to major streets or railroads.
2. Promote a mix of industrial uses that provide the City with a sound, diverse industrial base, and which is consistent with the City's infrastructure constraints.
3. Locate industry with access to major streets, truck routes, and rail service.

4. Industrial development should not create significant off-site circulation, noise, dust, odor, visual, and hazardous materials impacts that cannot be adequately mitigated.
5. Major streets, which serve as entrances to the City, shall receive special design treatment to reduce aesthetic impacts and traffic concerns. Design standards for these parcels shall be as follows:
 - a. The minimum building setback from the right-of-way line shall be 40 feet.
 - b. There shall be a minimum 15-foot landscaped area adjacent to the right-of-way.
 - c. The number of driveway approaches shall not be greater than two (1 per 200 lineal feet) for individual parcels; efforts should be made to consolidate driveways along common property boundaries, where possible.
 - d. Signs shall be low profile and non-rotating.
6. The industrial designated property located on the Merced River east of SH 99 is limited to the existing private wastewater treatment plant. No other industrial uses are permitted.

Objective

- B. Provide for the compatible integration of industrial uses in the Community.

Policies, Standards

1. Industrial land shall be accessible by residential areas in the community.
2. Development standards between industrial properties and residential uses shall be as follows:
 - a. Where properties planned for industry abut properties planned for residential uses, the minimum setback for any new industrial building shall be 75 feet.
 - b. On properties planned for industry, a landscaped setback 20 feet wide containing deciduous and evergreen trees shall be planted and maintained along the property line with abutting property planned for residential uses and along abutting local streets.
 - c. A masonry wall shall be erected along the property line between properties planned for industry and properties planned for residential uses. Where this wall is in the front yard setback it shall be 3-1/2 feet; otherwise it shall be six feet or such greater distance as may be necessary to mitigate impacts.

- d. A masonry wall three and one-half feet in height, an earth berm three and one-half feet in height, or any combination of wall and berm shall be erected along the setback line 20 feet from and parallel with local streets abutting residential uses.
- e. Roof-mounted and detached mechanical equipment shall be acoustically buffered to prevent noise from the equipment from exceeding 55 dBA measured at the nearest residential property line.
- f. Exterior area lighting for industrial buildings, parking areas, garages, access drives, and loading areas, shall be low profile, hooded, and directed away from abutting property planned for residential use.

3.5 PUBLIC AND INSTITUTIONAL LAND USE

Objective

- A. Provide sites for adequate public facilities to serve projected growth.

Policies, Standards

- 1. Establish the following public facility land uses:
 - a. Public Facilities. This designation indicates areas owned and maintained by public or institutional agencies such as the city, schools, hospitals, other special districts.
 - b. Parks and Open Space. This designation determines areas of permanent open spaces, parks and/or areas precluded from major development.
- 2. Sites depicting planned Public Facilities or Parks and Open Space are conceptual and may be located anywhere in the same general vicinity.

Objective

- B. Provide for adequate school sites and school site expansion to meet school facility needs in a timely manner as provided by law.

Policies, Standards

- 1. Coordinate requests for development with the school districts.
- 2. Coordinate school location and site design with the school districts to ensure that adequate facilities are available.
- 3. Livingston will support school site identification and acquisition activities that are consistent with California Government Code Sections 66479-66482.

4. Elementary schools should be located on interior residential areas at collector/local street intersections. Additional street frontage is desirable to provide a transition area to adjacent residences. Schools should abut neighborhood parks with adjacent development backing or siding onto the school. Pedestrian and bicycle access should be provided.
5. Intermediate or Junior High Schools should be located in residential areas with a central location for surrounding area elementary schools at collector/collector or collector/local street intersections. Additional local street frontage is desired for transition to adjacent residential areas. Maximize pedestrian and bicycle access and on/off-site circulation. These schools should be located so that there are future expansion opportunities.
6. High Schools should be located at arterial-collector intersections with additional frontage on at least one other street. These sites should be located to provide for future expansion.
7. New commercial development should be discouraged within a minimum of 1/4-mile of school sites.
8. High-Density Residential complexes abutting school sites are discouraged.
9. The City and school districts shall continue to encourage joint use of school multi-purpose facilities and open space.
10. The school districts shall be encouraged to coordinate their school location, facility construction and phasing with the City's development guidelines contained in the Land Use Element and the City's Capital Improvement Plan to ensure that school facilities are located in areas where there are planned and programmed streets, sewer and storm drainage systems and other necessary infrastructure.

CHAPTER 4
CIRCULATION ELEMENT

4.0

CIRCULATION ELEMENT

Goal

- 4.1 ESTABLISH A SAFE AND EFFICIENT TRANSPORTATION SYSTEM THAT PROVIDES ADEQUATE ACCESS THROUGHOUT THE CITY.**

Objective

- A. Implement a public street system as depicted on the Circulation Plan (Figure 4-1).

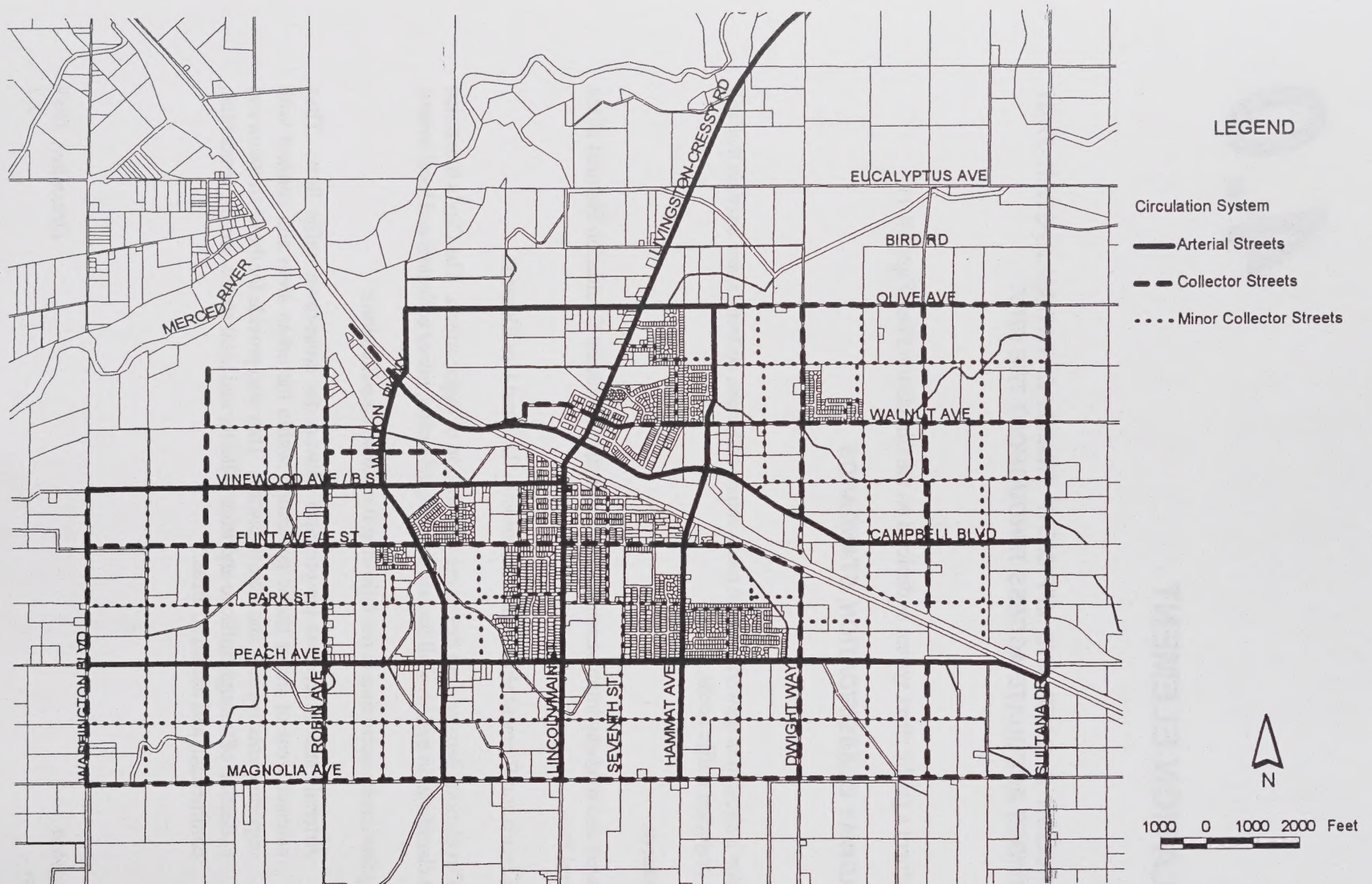
4.2 ROADWAY CLASSIFICATION, STANDARDS

Objective

- A. Develop a circulation network of local roads, minor collectors, collectors, and arterials that will meet projected traffic needs.

Policy, Standards

1. All street and roadway improvements shall be consistent with the Circulation Element of the General Plan.
2. The Circulation Element shall be consistent with the Land Use Element.
3. The Circulation Element shall determine the function of major streets. The City's functional street classification system shall include arterials, collectors, minor collectors and local streets.
4. Designate streets according to the following functional classifications:
 - a. Arterials streets serve as the principal network for cross-town traffic flow. They connect areas of major traffic generation within the urban areas and connect with important county roads and state highways. They also provide for the distribution and collection of through traffic to and from collector and local streets serving residential, commercial, and industrial areas.



Quad Knopf

Circulation Plan

Figure 4-1

- b. Collector streets provide for traffic movement between arterial and local streets, traffic movement within and between neighborhoods and major activity centers, and limited direct access to abutting properties.
 - c. Local streets provide for direct access to abutting properties and for very localized traffic movements within residential, commercial and industrial areas.
 - d. Minor collectors are local streets designated to connect neighborhoods and designed to discourage through traffic.
4. Standards for new street development shall be consistent with the General Plan.
5. Arterial, collector and local street standards shall be developed which provide adequate capacity for their appropriate function, and these shall be incorporated into the Subdivision Standards for the City of Livingston.
6. Actual design and improvement to ultimate standards shall be achieved through inclusion of facilities as part of the City-wide Capital Improvements Program, or by new developers as areas adjoining the designated circulation system are developed, with allowance for bicycle lanes, where planned.
7. Standards for new street development can be altered or refined through the specific plan or planned unit development process when it can be demonstrated that projected traffic flows can be accommodated.
8. New street developments in areas of urban expansion should not be limited to a "grid system." More efficient and varied street layouts should be encouraged, wherever possible.
9. The City designates Service Level "C" as defined in the Highway Capacity Manual (published by the Transportation Research Board of the National Research Council) as the minimum desirable service level at which arterial streets and collector streets should operate. All new facilities in these categories shall be designed to operate at this level or better for a period of at least 20 years following their construction.
10. The right-of-way widths and construction widths of all classes of streets from local to arterial shall be updated as necessary to reflect the street classifications in the Circulation Element.
11. Right-of-way essential to the circulation system should be dedicated and/or developed to the appropriate extent and width when a zone change to a greater density, division of property or development occurs. The City shall have Merced County apply the same requirements within the Livingston Sphere of Influence.
12. City circulation system street alignments shall be coordinated with Merced County circulation system street alignments.

13. Merced County should incorporate Livingston's Circulation Element into its Countywide General Plan.
14. No development shall be approved unless it is found to be consistent with the adopted Circulation Element and policies of the General Plan with the Circulation Element.

Arterials

15. The following streets are proposed to be arterial streets within Livingston's urban area:

East-West Arterials

Olive Avenue west of
Livingston-Cressey Road
Campbell Boulevard
Peach Avenue
B Street

North-South Arterials

Winton Parkway
Main Street/Livingston-Cressey Road
Hammatt Avenue

16. Arterials shall typically be developed within an 84-foot right-of-way. This will accommodate either four travel lanes and bike lanes or two travel lanes, bike lanes, and a continuous left turn lane or median island (Figure 4-2).
17. The primary purpose of arterials is to carry traffic. Parking is prohibited on such streets and should be eliminated where it now exists along existing arterials as traffic safety conditions warrant.
18. Arterials shall be built in areas where traffic demand warrants the development of this facility to meet the adopted level of service standard.
19. Arterial streets should be built at a typical separation of one mile.

Collectors

20. The following streets are proposed to be collectors within Livingston's urban area:

East-West Collectors

Olive Avenue east of Hammat
Avenue
Walnut Avenue/Davis Street
F Street
Magnolia Avenue

North-South Collectors

Washington Boulevard
Future ½ mile street between Robin and Washington
Robin Avenue north of B Street
Dwight Way
Future ½ mile street between Dwight and Sultana
Sultana Avenue

21. Collectors shall typically have an 84-foot right-of-way width which allows four lanes with bike lanes, or permits two lanes, bike lanes, and a continuous left turn lane or median island (Figure 4-2)
22. Collector are typically separated at approximately one-mile intervals centered between arterial streets and planned to intersect with other streets so as to maximize traffic safety and discourage fast flowing traffic through residential areas.
23. Intersections of and by arterials and collectors shall form four-leg, right angle intersections. Offset or skewed intersections of streets shall be avoided where possible.

Local Streets

24. Local street right-of-way shall be a minimum of 55 feet which allows two travel lanes and parking. Minor collectors may be developed with a 60-foot right-of-way to include two travel lanes, and parking.
25. Local streets shall serve residential neighborhoods, and shall not be used to carry through traffic or high traffic volumes.
26. Local streets shall not carry an unreasonable level of through traffic. Should it be determined that a local street is carrying an unacceptable level of through traffic, the City may use appropriate means to reduce traffic through creation of one-way traffic flow, installation of traffic diversion devices, and/or any other means deemed to be acceptable under the Vehicle Code of the State of California.
27. Permit design standards for local streets to reduce right-of-way width and paving where innovative approaches to street design are proposed within a planned development.
28. A minimum of 125 feet shall separate intersections of local streets with collectors or arterials.

Median Breaks/Driveway Standards

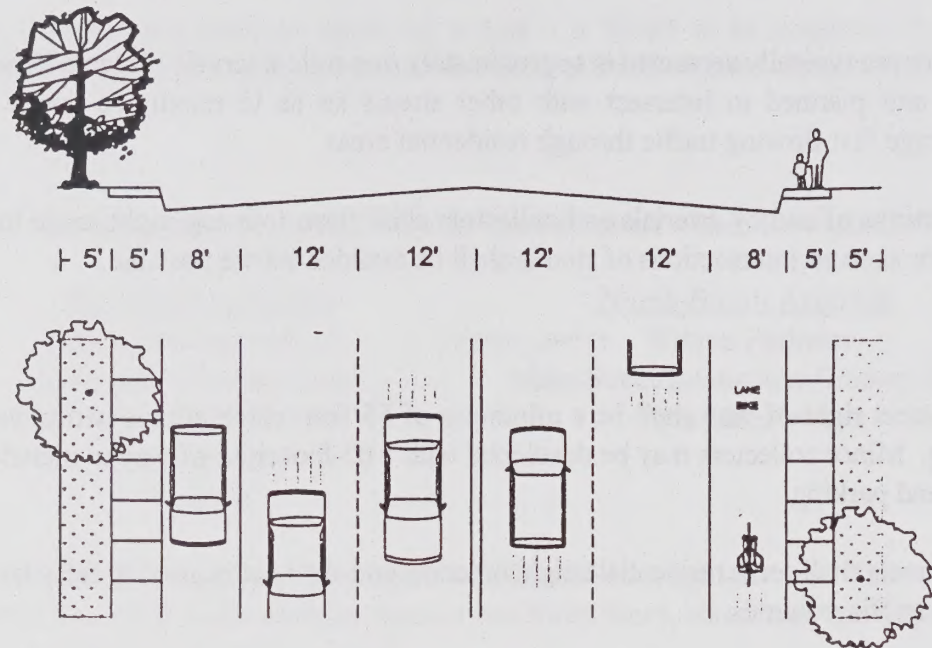
29. Median breaks and driveway standards for arterial, collector and local streets directly affect the performance of these roadways, and the following minimum standards have been developed to facilitate the proper operation of these roadways:

Arterial Street Standards

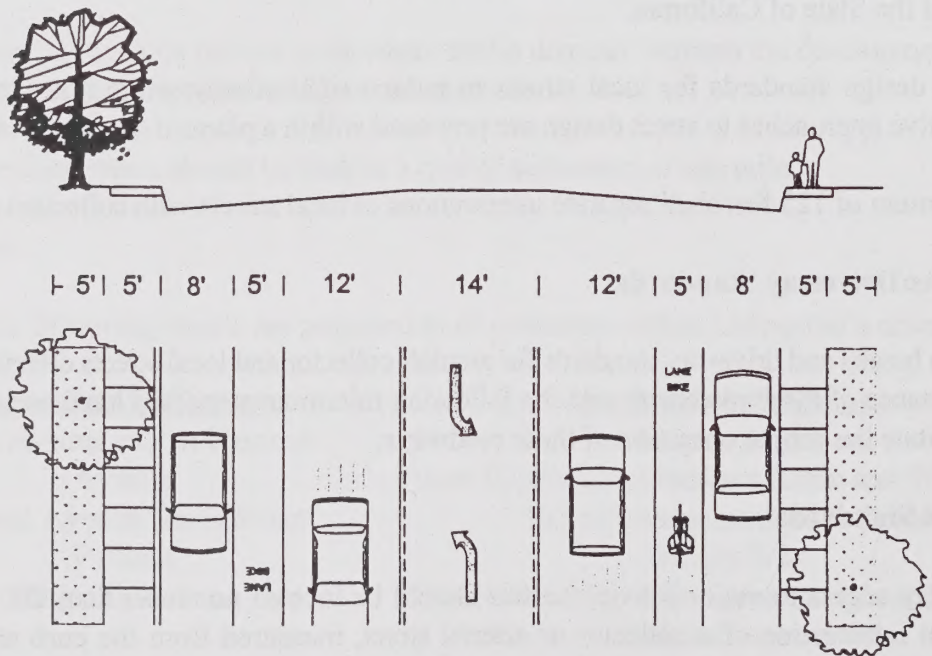
30. Driveway access to major activity centers should be located no closer than 200 feet to the adjacent intersection of a collector or arterial street, measured from the curb return to the nearest edge of the driveway. If driveways must be provided near intersections for facilities (such as service stations) these driveways shall not be serviced by median breaks and shall be located no less than 50 feet from the intersection measured from the curb return to the nearest

Street Configurations for 84 Foot Right of Way

TYPICAL ARTERIAL FOUR TRAVEL LANES, ON-STREET PARKING OR BIKE LANE



TYPICAL COLLECTOR TWO TRAVEL LANES, CONTINUOUS LEFT TURN LANE, ON-STREET PARKING, BIKE LANES



Quad Knopf

Street Development

Figure 4-2

edge of the driveway. If more than one is required to serve a property, the driveways shall be separated by 50 feet measured edge-to-edge, not centerline to centerline.

31. The distance between driveways along commercially developed arterials should not be less than 400 feet measured from centerline to centerline. Where this spacing is not practical, the development shall provide acceptable traffic mitigation measures in addition to those already required.
32. Where practical and desirable, driveways should be located on adjacent collector streets rather than on arterial streets.
33. Driveway consolidation shall be encouraged through joint access agreements along arterials.
34. Full median breaks, where there is no adopted design, should provide access to collector streets and to major activity centers and should parallel the standards for driveways: not less than 200 feet from an adjacent intersection of an arterial or collector street, and not less than 1,000 feet between full median breaks.

Collector Street Standards

35. Driveway access to major activity centers should be located no closer than 150 feet to the adjacent intersection of a collector or arterial street as measured from the curb return to the nearest edge of the driveway. If driveways must be provided near intersections for facilities (such as service stations), these driveways shall not be serviced by median breaks and shall be located no less than 50 feet from the intersection, measured from the curb return to the edge of the driveway. If more than one is requested to serve a property, the driveways shall be separated by 50-feet, measured edge-to-edge, not centerline to centerline.
36. The distance between driveways and intersecting local streets should not be less than 300 feet measured from the curb return to the nearest edge of the driveway. Where this spacing is not practical, the development shall provide acceptable traffic mitigation measures in addition to those already required.
37. Driveways to residential property along collectors should be consolidated whenever possible.
38. Medians on collectors shall be provided by concrete where left turn control is needed and by painted medians on two-way left turn pockets where appropriate. Where concrete medians are provided, median breaks should be spaced not less than 300 feet apart.
39. The City shall require the use of street-type driveway approaches on collector and arterial streets for any development containing 20 or more parking spaces.

4.3 GOODS MOVEMENT

Objective

- A. Provide for the safe transport and delivery of goods in and out of the City.

Policies, Standards

1. Truck routes to efficiently move heavy traffic through the City are designated on Figure 4-3.
2. Route heavy traffic to designated arterial and collector streets only and away from local residential streets.
3. Provide adequate access to busy destination points such as shopping centers, recreational sites, and employment centers.

Objective

- B. Assure the continuation of railroad freight service to the City of Livingston.

Policies, Standards

1. Pursue expansion of industrial facilities that will use railroad freight services.
2. Support and participate in MCAG rail transportation activities.

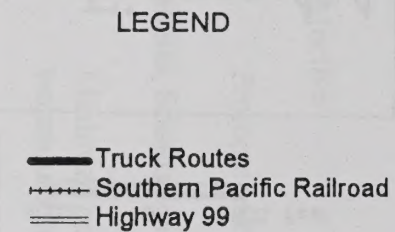
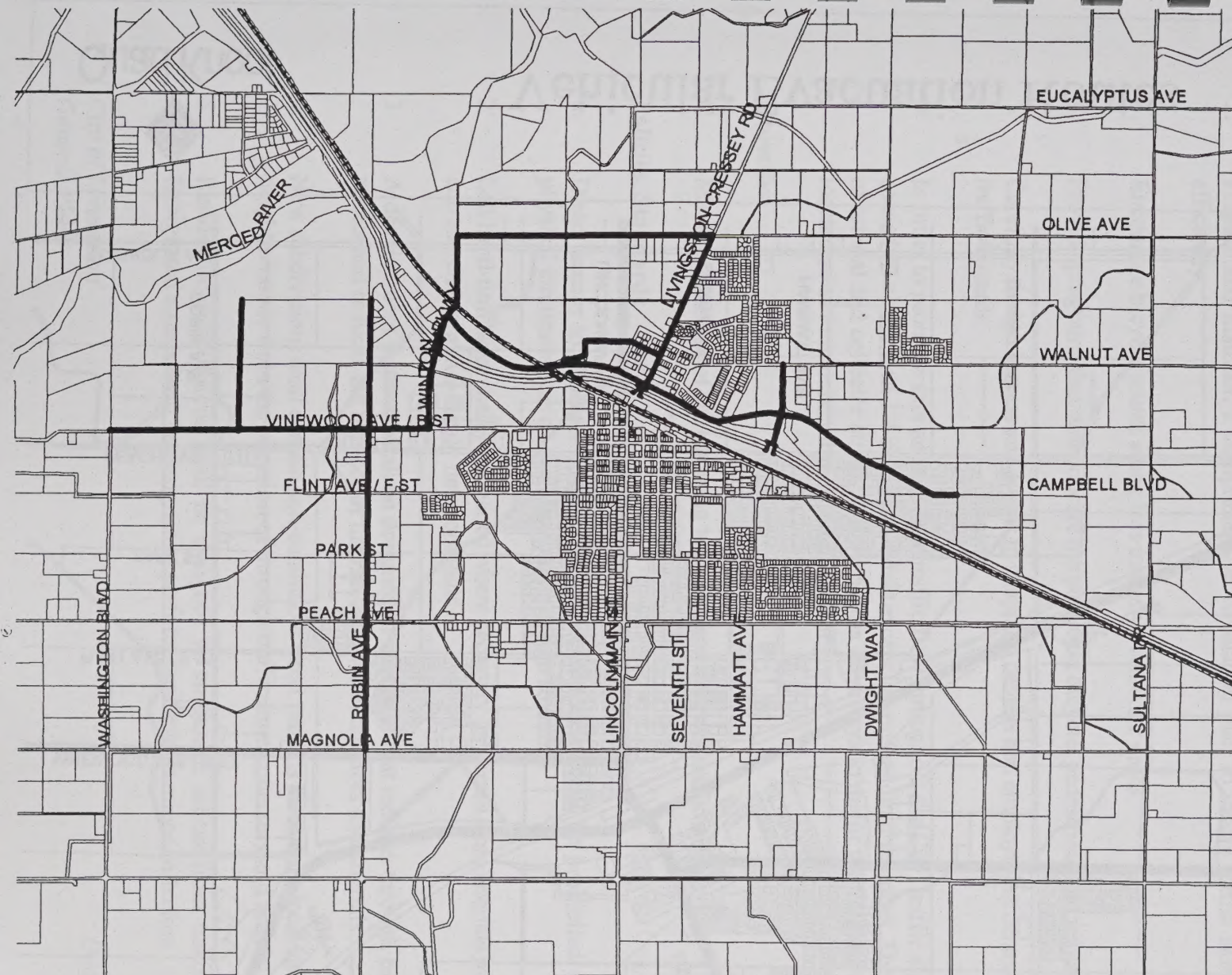
4.4 SAFETY STANDARDS

Objective

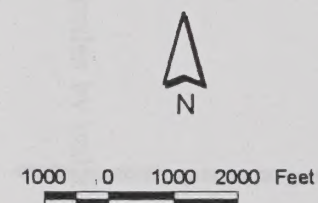
- A. Maintain safe and efficient circulation routes for safety and emergency purposes.

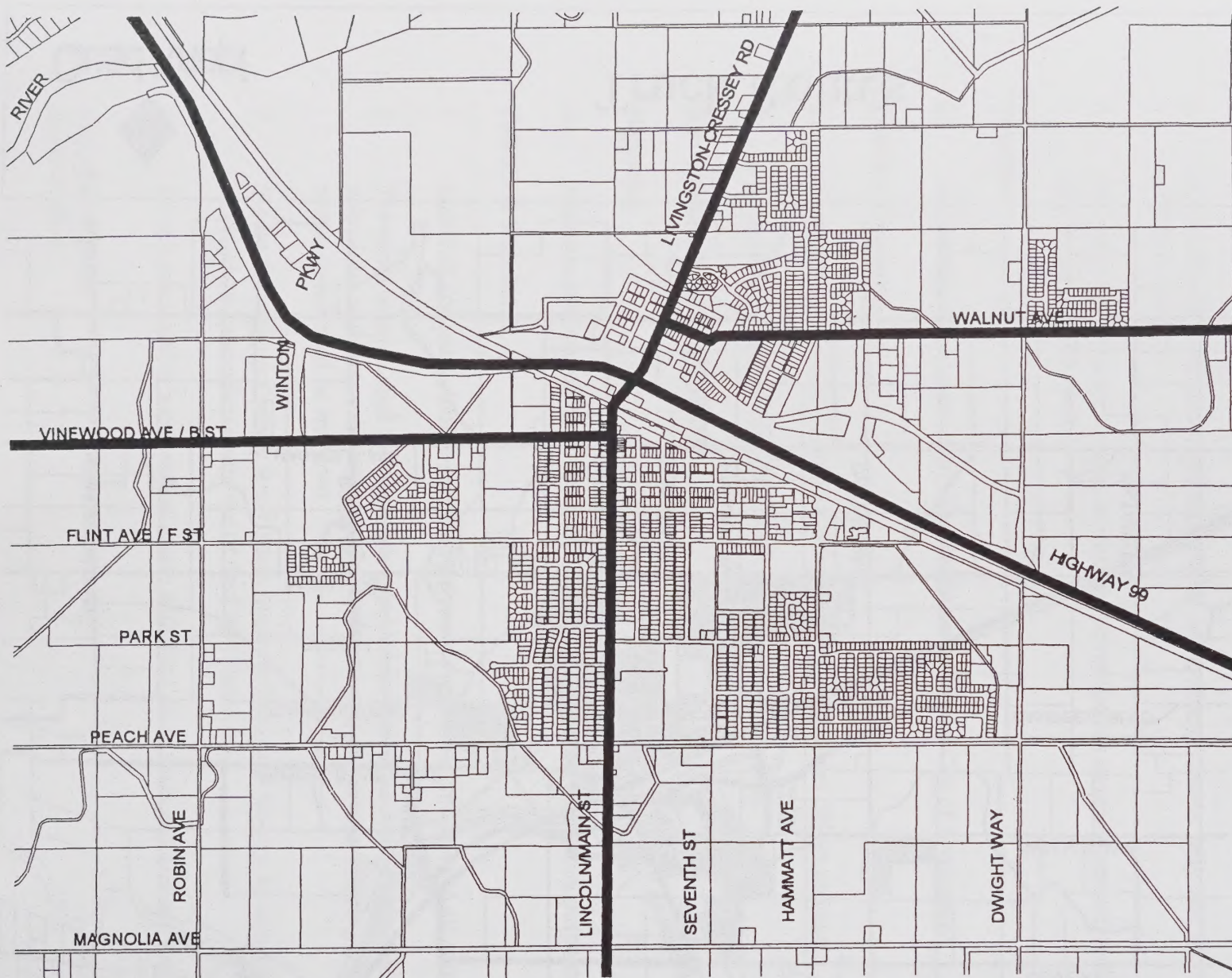
Policies & Standards

1. Establish adequate plans to insure effective police and fire protection to all parts of the City.
2. The street network shall provide a quick and efficient route for emergency vehicles, including police, fire and other vehicles, when responding to calls for service. The length of single-entry access routes shall be restricted.
3. SH 99, Livingston-Cressey Road, Main Street, B Street and Walnut Avenues are designated as vehicular evacuation routes out of the City (Figure 4-4).
4. Coordinate the City's evacuation routes with state and county government plans.



Upon its completion, the southern extension of Winton Parkway shall replace the Robin Avenue truck route.





LEGEND

 Vehicular Evacuation Routes



1000 0 1000 Feet

Objective

- B. Promote traffic safety throughout the City.

Policies, Standards

1. Minimize hazardous encounters among all transportation modes by utilizing special safety techniques and precautions at intersecting points.
2. Prepare and maintain a comprehensive circulation plan to insure traffic safety and travel efficiency.
3. Encourage bicycle routes along less intensive vehicular paths.
4. Provide programs that will educate the public on bicycle, pedestrian, and vehicular safety.
5. Carefully design ingress and egress to shopping centers and employment centers to minimize traffic hazards.
6. In order to promote safe and efficient traffic flow throughout the City, traffic signals shall be spaced no closer than 1/4 mile on arterials except in unusual circumstances. The intersections of arterial and collector streets and the access driveways to major traffic generators shall be located so as to maintain this minimum spacing.

Objective

- C. Maximize the use of site planning techniques to improve traffic safety.

Policies, Standards

1. Direct access to collector streets from residential areas shall be prohibited except where physical circumstances do not allow other design solutions.
2. Left hand-turn lanes shall be provided where necessary for access from arterials into high traffic commercial or multi-family developments.
3. A development's streets shall be designed in a manner that reduces through traffic on local streets and reduces the number of intersections with collectors and arterials.
4. New subdivisions shall contain non-continuous street patterns for interior local streets to protect neighborhoods from the intrusion of through traffic from collectors and arterial streets.
5. Residential subdivisions shall be designed to encourage access from collector streets. Designated streets shall be designed to perform their role as minor collectors.

6. Promote design standards that allow for safe and efficient transport, delivery, loading and unloading of goods from service vehicles within commercial and industrial areas.
7. Where major new activity centers are proposed along arterial streets, designs shall be encouraged which minimize construction along the property line or along the adopted set-back line, whichever is appropriate.
8. Developers shall mitigate traffic impacts associated with their projects.
9. Promote a policy of consolidating driveways, access points and curb cuts along existing major arterials, or arterials when development or change in intensity of development or land use occurs or when traffic operation or safety warrants.
10. Where arterials and collector streets are required, residential development shall be oriented away (side-on or rear-on) from such streets, and properly buffered so that the traffic carrying capacity on the street will be preserved and the residential environment protected from the adverse characteristics of the street.
11. Due to the traffic congestion which results from numerous points of ingress and egress along commercial streets, future commercial developments or modifications to existing developments shall be master planned with limited points of ingress and egress onto a major street. Ingress and egress to shopping centers should be carefully designed in order to promote traffic safety. Left-hand movements into and out of commercial areas should be minimized and existing points of ingress and egress shall be consolidated whenever possible.

Objective

- D. Upgrade and maintain existing transportation corridors to meet urban safety standards.

Policies, Standards

1. Encourage the development of improved signalization and intersection design.
2. Use traffic control devices such as center medians and/or left turn pockets where appropriate.
3. Provide adequate street lighting and traffic control devices throughout the City to ensure safe and efficient mobility.

4.5 TRANSPORTATION SYSTEM AND CONGESTION MANAGEMENT

Objective

- A. Maximize the efficiency of the existing street system.
- B. Encourage the proximity of compatible land uses to reduce unnecessary automobile travel.

Policies, Standards

- 1. The City encourages the use of energy efficient and non-polluting modes of transportation.
- 2. Transportation System Management and Transportation Demand Management are the applicable strategies for the mitigation of traffic and parking congestion. Public transit, traffic management, ridesharing and parking management are to be used to the greatest extent practical to implement transportation management strategies.
- 3. Promote the long term shifting of peak hour commute trips from the single occupant automobile to ridesharing, buses, pedestrian, and bicycles.
- 4. The use of alternative fueled vehicles is encouraged.
- 5. Large development shall be encouraged to incorporate transit passenger facilities, bicycle racks or lockers, shower facilities, as well as on site services (eating, mail, banking, etc.) as ways to encourage alternative modes for commute trips.
- 6. Livingston shall participate in a joint SH 99 Corridor Study with CalTrans and MCAG to determine the solution and funding options for the improvements needed to maintain an acceptable LOS on SH 99 through Livingston. The solutions to the segment problems will result in an operating LOS C.

4.6 STREET IMPROVEMENTS

Objective

- A. Protect rights-of-way for future street development.

Policies, Standards

- 1. The City shall adopt official plan lines to protect rights-of-way for future arterial and collector street improvements.
- 2. Establish street dedication requirements as conditions of approval of development entitlements.

4.7 MAINTENANCE/CONSTRUCTION

Objective

- A. Efficiently manage the construction and maintenance of the street system.

Policies, Standards

1. The maintenance of the investment in the existing and future infrastructure is a high priority for the community.
2. The City shall maintain a high level of intergovernmental coordination and citizen participation in the circulation and transportation planning process and work with other agencies to assure that regional transportation plans are consistent with the City's General Plan.
3. Develop, maintain and update as appropriate a 5-year Capital improvement Program that identifies and provides adequate sources of funding for both maintenance and improvement of the street and highway system.
4. Develop a traffic monitoring system to assist in establishing a priority system for expending street and highway funds.

4.8 PARKING AND ALTERNATIVE TRANSPORTATION MODES

Objective

- A. Promote a parking program that meets the needs of each land use type.

Policies, Standards

1. Adequate off-street parking shall be required of all commercial and industrial land uses to accommodate parking demand. Off-street parking shall also be required of multi-family residential land uses to accommodate tenants.
2. Parking standards shall be evaluated for new downtown development to ensure that parking requirements are satisfied within walking distance of development.
3. Parking standards shall be evaluated to assess the potential for offering reduced parking requirements to development that incorporate measures proven to reduce commute or customer trips.
4. Provide adequate parking areas at activity centers along major arterials.
5. Provide adequate parking facilities in the Downtown to accommodate the needs of the public.

6. Parking of commercial vehicles, gross vehicle weight rating 10,000 pounds or more, shall be prohibited on streets or building sites in residentially zoned districts except for pickup or delivery of persons or goods.
7. Encourage the development of truck terminals within the City to reduce truck parking in residential areas.

Objective

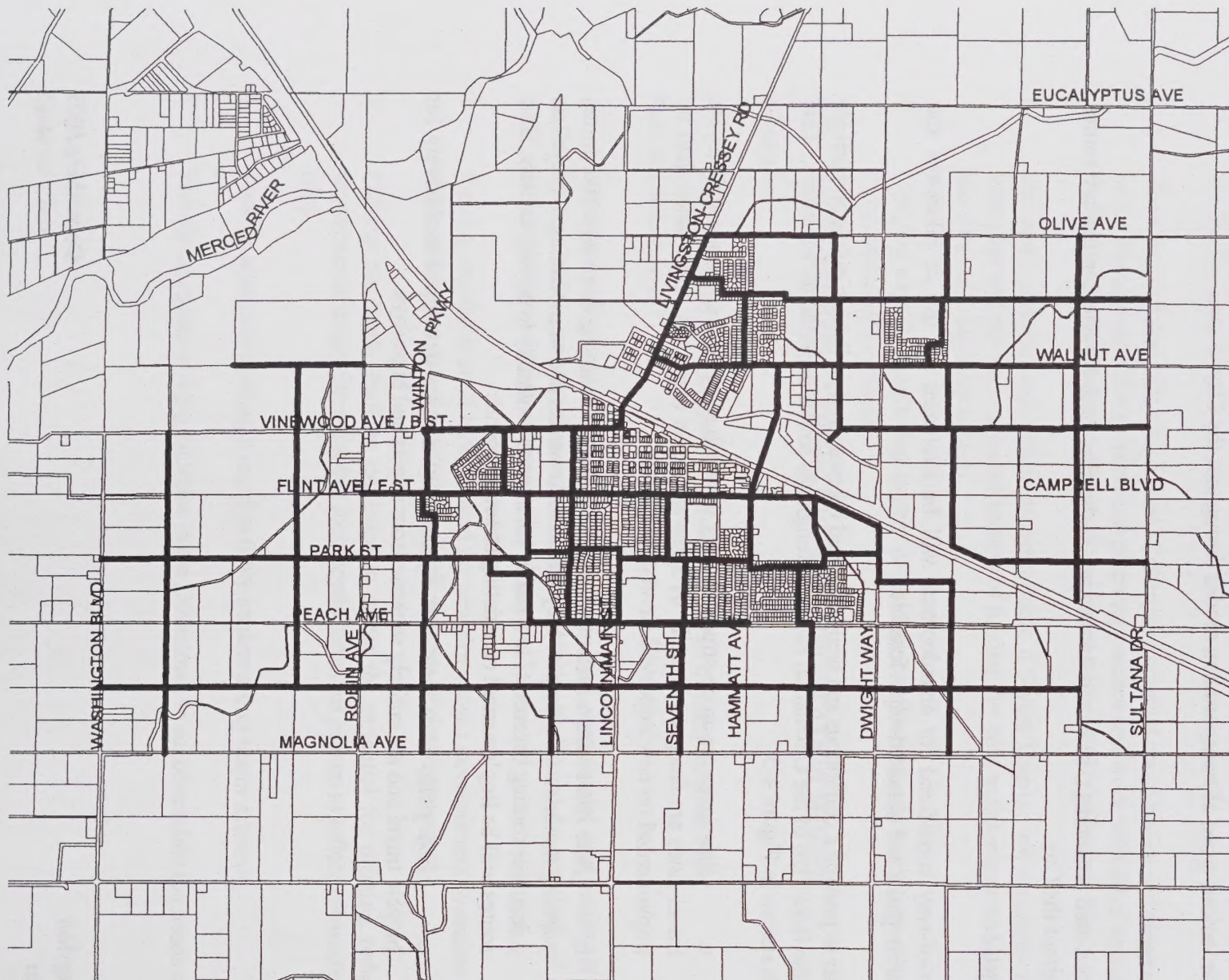
- B. Provide various types of transportation modes throughout the City.

Policies, Standards

1. Maintain and encourage safe and interesting pedestrian and bicycle circulation routes throughout the City.

Bicycle Facilities

2. Rights-of-way considered for abandonment will be evaluated for use as bikeways and pedestrian paths and obtained when feasible.
3. In order to provide a continuous and well-integrated bikeway system linking public and private uses, the Bike Plan of the Circulation Element designates streets intended for bikeways. This plan is shown in Figure 4-5.
 - a. *Bike lanes* are an on-street bikeway in which separate automobile and bicycle travel lanes are designed visually by signs and street markings. Bike lanes shall be implemented on new improved street or segments.
 - b. *Bike routes* are a system of streets with signs denoting them as a bike route, warning motorists to anticipate bicycles on these streets and to indicating to bicyclists a desirable routing because of low traffic volumes or continuity to activity centers. Bike routes will be implemented on existing street segments.
 - c. *Bike paths* have their own right-of-way and are developed exclusively for bicycle travel and are entirely separate from streets and highways.



LEGEND

 Bikeways

The final location of future minor collector streets as bikeways to be determined.



2000 0 2000 Feet



Quad Knopf

Bikeways Plan

Figure 4-5

4. On-street parking is prohibited on all new or improved sections of major streets planned for bike lanes where adequate street width is not available to accommodate both on street parking and a bike lane.
5. Secure bicycle parking facilities shall be required as conditions of approval for all new major activity centers, public and private places of assembly, and commercial or industrial developments which must provide at least twenty parking spaces.

Pedestrian Facilities

6. Sidewalks, paths, and appropriate crosswalks should be located to facilitate access to all schools and other areas with significant pedestrian traffic. Whenever feasible, pedestrian paths should be developed to allow for unobstructed pedestrian flow from within a neighborhood.
7. The City shall require curb, gutter, and sidewalks in all areas of the community to accommodate pedestrian traffic, especially along routes with high pedestrian traffic such as schools, parks, and the Downtown area. Installation of these improvements shall be encouraged to the extent feasible in existing neighborhoods where they do not currently exist.
8. The City shall promote safe, convenient, and accessible pedestrian ways within the community.
9. Where walls or fences are proposed for residential developments along major arterials, arterials, or collector streets, pedestrian access will be provided between the major arterial, arterial, or collector, and the development to allow access to transit vehicles operating on the street.
10. Require street lighting within the rights-of-way of all public streets.
11. Include pedestrian signal indications as an integral part of the installation of traffic signals.
12. Assure adequate sidewalk maintenance.

4.9 PROVIDE A TRANSPORTATION SYSTEM THAT IS COST-EFFECTIVE, ENERGY-EFFICIENT, AND ENVIRONMENTALLY SENSITIVE.

Objective

- A. Insure that the air pollution generated by transportation modes does not exceed required standards.

Policies, Standards

1. Maintain an automobile circulation system that promotes reduced vehicle travel.

2. The circulation system shall be designed and developed to minimize excessive traffic congestion, which would increase the rate of vehicle emissions. Development shall mitigate emission impacts primarily by implementing the standards of the San Joaquin Valley Unified Air Pollution Control District for a project's construction and operation/use.
3. A multi-modal transportation system shall be planned that meets the needs of the community and improves air quality.
4. State and federal funds earmarked for bicycle and transit improvements will be vigorously pursued and used.

Objective

- B. Insure that noise emissions generated by transportation modes do not exceed acceptable noise standards in various land use areas.

Policies, Standards

1. The circulation system shall be designed and developed to minimize excessive noise impacts on sensitive land uses. Development shall mitigate noise its associated circulation related noise impacts.
2. Develop standards to screen various noise-sensitive land uses from the effects of heavy vehicular traffic.
3. Identify the heaviest transportation-related noise pollutants on the Noise Contour Map of the Noise Element.
4. Insure that heavy vehicles utilize Livingston's Truck Route as a guide for maintaining an efficient circulation system.
5. Regulate the types of land uses in proximity to railroad facilities.

Objective

- C. A safe and convenient public transit system that meets the needs of all the economic segments of the community.

Policies, Standards

1. Support the range of fixed-route and demand-responsive public transit services provided by Merced County Transit and Stanislaus County Transit, which offer residents safe and affordable transportation.

2. Continue to search for new and innovative alternatives that will provide a more efficient public transit system for the residents from all segments of the social and economic community.
3. Require transit improvements at all sites deemed appropriate and necessary by the MCAG and CalTrans and the transit provider which are consistent with long range transit plans.
4. Provide benches, telephones and shaded areas at major transit destinations so people can utilize the transit system safely and comfortably. The City shall determine such need based on site plan review procedure and other planning implementation methods.
5. Long-range provision of transit services should be coordinated by the County of Merced and Stanislaus Counties.
6. Arterial and collector streets will be designed to allow transit vehicles to pull out of traffic. This policy may be implemented with either a continuous parking lane with bus stops, or with special bus pullout lanes.
7. Transit centers/stops shall be established to encourage the interface between commercial centers, high-density residential uses and the transit system.
8. Encourage transit alternatives to meet the basic transportation needs of the young, the elderly, the handicapped, and the person without access to an automobile.
9. Where alternative transit modes would connect, explore opportunities for a transit center within the City.
10. Encourage and provide for ride sharing, park and ride, and other similar commuter energy savings programs.

CHAPTER 5

**OPEN SPACE, CONSERVATION AND RECREATIONAL
ELEMENT**

5.0

OPEN SPACE, CONSERVATION AND RECREATION ELEMENT

5.1 AGRICULTURE

Objectives

- A. Preserve prime farmland, farmland of statewide importance, and important agricultural operations within the Livingston Sphere of Influence until logical and orderly urban growth is appropriate.
- B. Planning boundaries are established around the City's perimeter to maintain the physical separation between the City and nearby agriculture operations and to maintain the scenic beauty surrounding the City.
- C. Edges such as roadways, railroad rights-of-way, irrigation ditches, shall be used as growth phasing boundaries to ensure that agricultural operations are not eliminated prematurely.

Policies, Standards

- 1. Maintain a 20-acre minimum parcel size for Reserve designated parcels to encourage viable agricultural operation and to prevent parcelization into rural residential or "ranchette" developments.
- 2. Increase residential densities through integration of small-scale duplexes into areas designated for single-family development, thereby reducing the need for conversion of prime agriculture land.

5.2 NATURAL RESOURCES

Objectives

- A. Protect natural resources including groundwater, soils, and air quality, to meet the needs of present and future generations.

- B. Ensure that environmental hazards including potential flooding and impacts from agricultural practices are adequately addressed in the development process within the City and the Livingston Sphere of Influence.

Policies, Standards

1. Protect areas of natural groundwater recharge from land uses and disposal method, which would degrade groundwater quality. Promote activities, which combine stormwater control, and water recharges.
2. Expand programs that enhance groundwater recharge in order to maintain the groundwater supply, including the installation of detention ponds in new growth areas.
3. No urban level development shall be approved in the City unless the development is, or can be served by the City sewer system.
4. Water conservation methods shall be continued.
5. To assist the City in meeting the clean air quality requirements of the federal and state Clean Air Acts, the San Joaquin Valley Unified Air Pollution Control District will be consulted to provide community planning guidance to help reduce potential air quality impacts.
6. Promote biological diversity and the use of plant species compatible with the bio-region.
7. If street trees are removed, they shall be replaced with tree species specified on the City's Street Tree Master Plan.
8. New construction activities shall comply with the PM-10 control measures as set forth by the San Joaquin Valley Unified Air Pollution Control District's *Guide for Assessing and Mitigating Air Quality Impacts*.
9. The *Guide for Assessing and Mitigating Air Quality Impacts* will be used to evaluate and mitigate the effects of new developments to the extent feasible.
10. Properties which have the potential to support listed plant and animal species will be required to have a biological investigation as a condition of development. Surveys for species shall follow both Federal and State protocols.

5.3 RECREATION

Objective

- A. To provide recreational opportunities including local parks for the existing community, and projected population in future growth areas.

Policies, Standards

1. Distribute adequate parks facilities throughout the City to provide organized and informal recreation opportunities and open space for City residents.
2. Provide recreation programs that meet the needs of children, adults and senior citizens in the City.
3. Provide an appropriate ratio of passive and active uses for each park type. Ensure that all parks provide the potential for passive, restful relaxation. A major portion of some parks shall be for passive activity while a portion of other parks may be for active recreation.
4. Improvements to existing parks shall be primarily in the form of upgrading the quality of existing facilities and improvements to accommodate new residents. This shall be achieved by either remodel or redevelopment. Facilities shall be constructed which are durable and require low maintenance, wherever possible.
5. Other improvements to existing parks shall be for the purpose of reducing maintenance cost, water use, improving safety and aesthetics.
6. The standard park acreage for residents is 5.0 acres per 1000 people. This acreage may include school district property which is made available through cooperative agreements, park-ponds (to the extent that they are accessible and usable recreational areas), neighborhood parks, pocket parks, community parks and community recreational facilities. Priority should be given to development of active recreation and sports areas in conjunction with existing and new school facilities. Recreational facilities should be provided in accordance with the standards in Table 5-1.

Table 5-1
Park Recreation Community Standards

Facility	Acreage	Population Served
Park Acreage	5 acres	Per 1,000 persons
Swimming Pool	1 pool	Per 15,000 persons
Golf Course	18 holes	Per 30,000 persons
Tennis Courts	Set of 4 courts	Per 8,000 persons
Basketball Courts	1 court	Per 1,000 persons
Baseball Field	1 field	Per 5,000 persons
Soccer Field	1 field	Per 3,000 persons
Neighborhood Recreation Center	1 center (under 3,000 square feet)	Per 3,000 persons
Community Center	1 center	Per 15,000 persons

7. Parks shall be located along collector roads wherever possible.

8. Where possible, parks should be developed in conjunction with school property to create a larger combined open space and recreation facility for the community and to reduce the costs for parks and recreation facilities.
9. Where possible, parks should be developed in conjunction with existing and future drainage basins to create a larger combined open space along with additional space for active and passive recreation. Existing ponds should be adapted for park use where possible. Safety concerns must be addressed and adequate space at or above street level should be provided.
10. Park facilities should be distributed throughout the City as evenly as possible.
11. Neighborhood park facilities may be contained within community parks.
12. Provide active recreation facilities in several locations in the City to accommodate community needs.
13. Community facilities of a specialized nature may be developed to service the particular interest of the community.
14. Not all community facilities should occur at each community park; they should be based on need, and should occur at various City parks.
15. The active community sports facilities should be lighted for extended hours of use when it does not conflict with adjacent land uses.
16. The majority of City parks should have some active recreational facilities. These facilities may be a single ballfield, a pair of tennis courts, a group of horseshoe pits or a group picnic area. At the maximum level, these facilities may include a complex of ballfields, a sports center, or a swimming pool.
17. Parks shall be protected from intrusion by other uses. Areas designated for park sites shall be preserved through zoning or the specific plan process. Alternative sites to those shown on the Land Use map may be permitted through a General Plan Amendment.
18. The City will review the Parks and Recreation Master Plan at least every five years to consider changing priorities and schedules for acquisition and development to implement the General Plan.
19. The City will coordinate with public schools, private industry and commercial developers to attain maximum use and minimum duplication in the cost of park and recreation facilities.
20. Where a county-wide recreation need is demonstrated in an area adjacent to the City, cooperative park development programs shall be encouraged on a cost-sharing basis. Joint

power agreements between the City and County agencies may be developed to implement such parks with financial aid management obligations in proportion to each agency's responsibilities.

21. If a subdivision, site plan, general plan amendment or rezoning is proposed on land which is designated for potential park use, prior to entitlements, permits or other approvals, the City Council shall determine the feasibility of accelerating public acquisition of the property, or redesignate alternative areas.
22. When a site designated for a park is part of a subdivision map, the City may require the subdivider to dedicate the park area and prepare plans for its phased development. Development of the park proposal shall be consistent with this element and the Parks and Recreation Master Plan.
23. Seek State, Federal, and local grants to improve City recreation services and facilities.
24. Maintenance costs should be within the City's financial ability. Where necessary, the City may require the developer to establish financing mechanisms.
25. Support the establishment of public non-profit corporations with the purpose of promoting and supporting City park and recreation services and facilities for the general public.
26. Promote the use of volunteers and community groups for the provision of recreation programs, services, operation and maintenance and development of parks.
27. Efforts should be made to reuse abandoned railroad right of ways for regional recreational bike trails.
28. Park land acreage dedication obtained through the provisions of California Government Code Section 66477 shall be consistent with the Livingston Municipal Code.
29. Parks Department shall encourage economically self-sufficient recreation activities by implementing user fees, facility fees, and registration fees in its program.
30. Commercial recreational sites can be considered as viable alternatives to the dedication provided no more than ten percent of the planned park acreage is comprised of commercial recreation.

CHAPTER 6

URBAN BOUNDARY ELEMENT

6.0

URBAN BOUNDARY ELEMENT

6.1 URBAN BOUNDARIES

Objectives

- A. Livingston's orderly and logical urban growth as depicted on the General Plan map.
- B. Urban growth shall occur where urban services are available or can be extended.

Policies, Standards

- 1. Growth past the Phased Growth Boundaries shall be subject to a finding by the City Council that:
 - a. There is a clear, timely and demonstrable need for this action;
 - b. Urban services are available to the site; and
 - c. There is insufficient vacant land within the current phase boundary to accommodate growth.
- 2. Additional "unclassified" zoning is prohibited as detrimental to the planning process.
- 3. Priority shall be given to development of vacant, underdeveloped, and/or redevelopable land where urban services are or can be made available. Parcels should be substantially contiguous to existing development.
- 4. Identify and use natural and man-made edges such as local roadways and waterways, as urban development limits for growth phasing lines.
- 5. Where residential land is used as a buffer and transition between long-term agricultural uses portions of the city that adjoin the Sphere of Influence it shall be low density
- 6. Encourage the use of parks and open space to enhance gateways to the City.

6.2 GROWTH POLICIES

Objective

- A. Growth policies keep guide the timing, type, and location of urbanization, preserve resource lands, protect natural features and open space, and encourage energy conservation.

Policies, Standards

1. Sequential urban growth boundaries are hereby established to provide a 20 year planning boundary, and subsequent ten year program boundaries.
2. Each sequential urban growth boundaries is established as the area within which a full-range of urban services will need to be extended to accommodate urban development. This boundary shall be established based on the following factors:
 - a. Adequate residential, commercial and industrial capacity for the planning period.
 - b. Inclusion of a 30 percent vacancy factor ("flexibility factor") for residential and commercial development.
 - c. Provision of adequate industrial land.
 - d. Adequacy of infrastructure including existing and planned capacity of sewerage system, treatment plant, water system, schools, roadways, and other urban services and facilities.
3. New residential development shall be substantially contiguous to existing development. Development shall not occur unless at least 35% of a parcel is contiguous to existing urban development. This measure is intended to help reduce the unnecessary removal of finite natural resources, such as prime soil, to reduce the cost of community services provided to residents, and to eliminate "leap frog" development.
4. Extension of urban improvements and services, including water, sewer lines and storm drain facilities, into agricultural areas shall be managed as a means to direct the location and timing of new urban development.

6.3 GROWTH MANAGEMENT COORDINATION

Objective

- A. Coordinate growth management planning and implementation with Merced County.

Policies, Standards

1. Encourage Merced County to strictly limit urban development in the unincorporated portion of Livingston's Sphere of Influence in conformance with Livingston's General Plan.

2. Future development of lands within and adjacent to the City's Sphere of Influence, including the Sultana Drive/SH 99 interchange and its surrounding area, will have an effect on the implementation of the City's General Plan. The City of Livingston therefore reserves the right to review and comment on circulation and land use issues in this area as they arise.

CHAPTER 7

COMMUNITY DESIGN ELEMENT

7.0

COMMUNITY DESIGN ELEMENT

7.1 GATEWAYS/STREETSCAPE DESIGN

Objective

- A. Improve the appearance of city streets and reduce visual clutter along the City's main thoroughfares/corridors.

Policies, Standards

1. Promote a city-wide street tree planting program which enhances the appearance of the street and is scaled in relationship to the function of the roadway. Tree wells should be located and designed to maintain views for traffic and pedestrian safety.
2. The undergrounding of utilities along the City's main corridors is a priority. In developing areas, new development projects shall place all utility lines underground. The City will also explore a range of options for undergrounding utilities in existing developed areas.
3. Ensure all signs are compatible with the overall streetscape design including the redesign/removal of signs, which are disruptive elements.
4. No new outdoor advertising billboards shall be allowed within the Sphere of Influence.
5. Establish coordinated and distinctive signage, accent plantings and paving materials for entries into the City. Locations for this treatment are Winton Parkway, Hammett Avenue, Main Street at Magnolia and Olive. As primary entrances to the City, these streets should reflect higher standards of development. Standards should contain provisions for minimum building setbacks, landscaping, sidewalk pattern and street furniture, with distinctions made between upgrade of existing uses and new development. Proper orientation, design and architectural features shall be regulated through zoning and the site plan review process.
6. City shall implement its Redevelopment Plan.
7. Development standards shall be adopted for the gateways to the city to improve the practical function and aesthetic quality of those areas. Policy 3.4.A.5 shall be used as an interim standard until other standards are adopted.

7.2 RESIDENTIAL DEVELOPMENT

Objective

- A. Improve the appearance and condition of existing residential areas.

Policies, Standards

1. Pursue grant funding for housing conservation and rehabilitation of existing dwellings and to provide support for low- and moderate-income housing programs.
2. Existing City codes pertaining to abandoned and disabled vehicles on private property shall be enforced.
3. Review the adequacy of existing Zoning Code enforcement procedures pertaining to alley maintenance. Expand the program as necessary to prohibit all use of public alleys for storage.
4. Encourage the planting of street trees in existing residential neighborhoods. specific policies will also be included for street trees in new residential, commercial and industrial development.

Objective

- B. Promote high quality new residential neighborhoods.

Policies, Standards

1. Encourage site planning and housing design to include landscaped parkways and sidewalks.
2. Site plan review shall be required for all multi-family residential development, including provisions for building setbacks, lot coverage, parking, access and circulation, outdoor lighting, signage, architecture and landscaping.
3. Encourage the planting of street trees in new single-family and multi-family residential subdivisions.
4. The following techniques should be used in the design of multi-family residential development:
 - a. Varying front yard setbacks within the same structure;
 - b. Staggered and/or reversed unit plans to provide variability in the outward appearance of the building(s);
 - c. Building materials and design that ensure consistency with adjacent land uses and structures;
 - d. Adequate open space and landscaping;

- e. Dense landscaping adjacent to buildings;
 - f. Variety of orientations to the buildings to avoid monotony; and,
 - g. Limitation on second story views to adjacent property.
5. Parking areas in multi-family residential projects should be visible from the units they serve and be located behind the building where possible. Long rows of garages or parking spaces should be avoided.
 6. Landscaped ~~finger~~ planters should be provided after an average of every ten spaces and should, where possible, align with building entrances.
 7. Second story views to adjacent residential uses land should be prohibited.
 8. All new residential development shall include a landscaped parkway adjacent to the street curb.

7.3 COMMERCIAL AND INDUSTRIAL DEVELOPMENT

Objective

- A. Ensure that all commercial development is attractive, of high-quality design, and enhances the image of the city.

Policies, Standards

1. Establish site plan review procedures for all commercial and industrial development, including provisions for building setbacks, lot coverage, parking, access and circulation, outdoor lighting, signage, and landscaping.
2. Promote rehabilitation of appropriate commercial sites and investigate funding opportunities for rehabilitation/remodeling of small businesses.
3. Strengthen the City's sense of history by identifying and preserving historic structures throughout the community.
4. When more than one structure is on a site, they should be linked visually through architectural style, colors and materials, signage, landscaping, design details such as light fixtures, and the use of arcades, trellis' or other open structures.
5. The height and scale of new development should be compatible with that of surrounding buildings where an established pattern or character is apparent. New development should provide a transition from the height of adjacent structures to the maximum height of new development.

6. Tall dominating structures should be broken up by creating horizontal emphasis through the use of trim, awnings, eaves or other ornamentation, and by using a combination of complementary colors.
7. All roof equipment shall be screened from a horizontal line of sight. Screening should be an integral part of the roof design and not appear as a “tacked on” afterthought. For flat roofs, a screen enclosure behind the parapet wall may be used if it is made to appear as an integral part of the structure’s design. Ground or interior-mounted mechanical equipment (with appropriate screening) is encouraged as an alternative to roof-mounting.
8. Structures in pedestrian-oriented areas should provide continuous storefronts at the ground level front elevation.
9. Entries should be protected from the elements and should create a focus or sense of entry for the building. Wall recesses, roof overhangs, canopies, arches, signs, and similar architectural features should be integral elements of the building’s design calling attention to the importance of the entry.
10. Vertical mixed use projects, where residential uses are located above commercial or office uses, or office uses located above commercial uses, are encouraged.
11. Building signs shall be integrated into the design of buildings and should compliment the architecture. All signs should be compatible with the building and site design relative to colors, materials and placement, and should respect established architectural and/or historical character.
12. Monument-type signs are preferred over tall pole signs for business identification, wherever possible. Where several tenants occupy the same site, individual wall mounted signs are appropriate in combination with a monument sign identifying the development. Custom signs, which are unique and creative, are encouraged, provided that the style of the sign complements the style and design of the building. Historic signs that are in themselves architectural features should be retained.
13. The planting of street trees is encouraged for all existing and new commercial and industrial development.
14. Buildings, landscaping, parking and other development features should be arranged in a manner that is compatible with the size, scale and appearance of nearby development.
15. Landscaped areas should be clustered on a site to maximize their effect on the public view.
16. Landscaping should be used to define areas such as entrances to buildings and parking lots, define edges of various land uses, provide transition between neighboring properties (buffering), and provide screening for outdoor storage, loading and equipment areas.

17. Landscaping should be in scale with adjacent buildings and be of appropriate size at maturity to accomplish its intended purpose.
18. Portions of a site not utilized for parking, circulation, storage or other uses, shall be landscaped.
19. Parking should be screened and visually subordinate to the development. Parking lots should not overwhelm views of a site and should incorporate landscaping for all areas not used for vehicle storage, access or circulation.
20. Site planning should emphasize a strong relationship to the adjoining street(s) and encourage pedestrian circulation and access. Pedestrian access should be separate from vehicular access, where feasible.
21. Site plans should provide safe and well-defined pedestrian connections from buildings to parking areas, from buildings to the adjoining street(s), and among buildings on the same site. Pedestrian connections between commercial development and surrounding residential neighborhoods should also be provided.
22. Buildings, sidewalks, and parking lots should be located to minimize conflicts between pedestrian and vehicular circulation on a site.
23. Loading and trash facilities should be located where they may be adequately screened from view, generally at the rear of the structures, away from the street.
24. Long expanses of fence should be offset and architecturally designed to prevent monotony. Landscaped pockets and limited openings should be provided along this wall.

Objective

- B. Ensure that industrial development is attractive and of high-quality design, to enhance the image of the city.

Policies, Standards

1. Establish site plan review procedures for all new industrial development, including provisions for building setbacks, lot coverage, parking, access and circulation, outdoor lighting, signage, and landscaping.
2. Promote rehabilitation of appropriate industrial sites and investigate funding opportunities for rehabilitation/remodeling of small businesses.
3. Encourage the planting of street trees for existing and new industrial development.
4. Site design for new industrial development should consider the following:
 - a. Controlled site access;
 - b. Service, storage, and loading areas located at the rear or side of buildings;

- c. Screening of storage and outdoor work areas and equipment;
 - d. Landscaping, signage and other features to emphasize the main entrance;
 - e. Landscaping for all areas not developed for parking, storage, buildings, etc.
5. Design elements which are undesirable and should be avoided include:
- a. Large, blank, flat wall surfaces;
 - b. Exposed, untreated precision block walls;
 - c. Chain link fence and barbed wire;
 - d. False fronts;
 - e. "Stuck on" mansard roofs;
 - f. Materials with high-maintenance (such as stained wood, shingles or light gauge metal siding)
 - g. Mirror window glazing
 - h. Loading doors facing the street; and
 - i. Exposed roof drains.
6. Where industrial development abuts non-industrial uses, appropriate buffering techniques should be employed such as setbacks, screening landscaping, or some combination of these.
7. An industrial site should accommodate all of its required parking on-site without the use of on-street parking.
8. On-site circulation should be designed to provide safe and efficient access for delivery vehicles, visitors and employees, and pedestrians.
9. Loading and delivery areas should be clearly marked with directional signage where multiple access points are provided.
10. Loading areas should be designed to accommodate trucks without having to back onto or otherwise use the adjoining street.
11. When security fencing is required, it should be a combination of solid pillars, or short solid wall segments, and wrought iron grillwork.

7.4 GENERAL COMMUNITY REDEVELOPMENT

- 1. Design the community so that there is interaction between neighborhoods and a strong emphasis on neighborhood conservation.
- 2. Priority should be given to development in the downtown area.

CHAPTER 8

NOISE ELEMENT

8.0

NOISE ELEMENT

8.1 PROJECT EVALUATION

Objectives

- A. To protect the citizens of the City from the harmful and annoying effects of exposure to excessive noise.
- B. To protect the economic base of the City by preventing incompatible land uses from encroaching upon existing or planned noise-producing uses.
- C. To preserve the tranquility of residential areas by preventing noise producing uses from encroaching upon existing or planned noise-sensitive uses.
- D. To educate the citizens of the City concerning the effects of exposure to excessive noise and the methods available for minimizing such exposure.
- E. To emphasize the reduction of noise impacts through careful site planning and project design, giving second preference to the use of noise barriers and/or structural features to buildings containing noise-sensitive land uses.

Policies

- 1. Table 8-1 depicts the ranges of noise exposure from transportation noise sources which are considered to be acceptable, conditionally acceptable, or conditionally unacceptable for the development of different land uses. Table 8-1 shall be used to determine whether mitigation is needed for development of land uses near major transportation noise sources.
 - a. In areas where the noise environment is acceptable, new development may be permitted without requiring noise mitigation.
 - b. For areas where the noise environment is conditionally acceptable, new development shall be allowed only after noise mitigation has been incorporated into the design of the project to reduce noise exposure to the levels specified by the Noise Element.

- c. For areas where the noise environment is conditionally unacceptable, new development in compliance with the policies of the Noise Element may not be feasible.
- 3. New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected future levels of noise from transportation noise sources which exceed the noise levels specified in Table 8-2 for the given land use.
- 4. Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed the noise levels specified in Table 8-2.
- 5. New development of noise-sensitive land uses shall not be permitted where the noise level due to existing stationary noise sources will exceed the noise level standards of Table 8-3.
- 6. New proposed stationary noise sources, or existing stationary noise sources which undergo modifications, shall not be permitted where the noise level exceeds the standards of Table 8-3.
- 7. The preferred method of noise control is thoughtful site design. Secondly, noise control should be achieved through the use of noise barriers. Site and building design guidelines may include:
 - a. The backyards of single-family residences should not back onto the primary noise source. Where this is not possible, the narrow portion of the building should face the primary noise source, and the interior layout should locate the most sensitive areas away from the noise source by placing garages, storage facilities, carports or other such areas nearest the noise source.
 - b. Patios and balconies of apartments should be placed on the side of the building opposite the noise source.
 - c. Commercial and industrial structures shall be designed so that noisy equipment is located as far as possible from noise-sensitive land uses, and/or is shielded by structures.
 - d. Two-story residential construction shall not be permitted immediately adjacent to major roadways, the railroad, or other equally significant noise source unless an adequate combination of noise attenuation procedures is used.
 - e. When possible, residential cul-de-sacs should be perpendicular to adjacent arterials or collectors.
 - f. Loading and unloading activities for commercial uses that are located near noise-sensitive uses should be conducted in an enclosed loading dock with a positive seal between the loading dock and trucks.

8. Development plans, programs and proposals shall not be approved unless they are in compliance with the policies of the Noise Element.
9. Prior to approval of the proposed development in a noise impacted areas, or the development of an industrial, commercial or other noise generating land use in or near an area containing existing or planned noise-sensitive land uses, an acoustical analysis may be required if:
 - a. The existing or projected future noise exposure at the exterior of buildings, which will contain noise sensitive uses, or within proposed outdoor activity areas (patios, decks, backyards, pool areas, recreation areas, etc.) may exceed 65 dB L_{dn} (or CNEL).
 - b. Interior residential noise levels resulting from offsite noise may exceed 45 dBA.
10. When noise studies are necessary they shall:
 - a. Be the responsibility of the applicant.
 - b. Be prepared by an individual or firm with demonstrable experience in the fields of environmental noise assessment and architectural acoustics.
 - c. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
 - d. Include estimated noise levels for existing and projected future (10-20 year hence) conditions, with a comparison made to the adopted policies of the Noise Element.
 - e. Include recommendations for appropriate mitigation measures to achieve compliance with the adopted policies and standards of the Noise Element.
 - f. Include estimate of noise exposure after the prescribed mitigation measures have been implemented.
 - g. The acoustical analysis shall be prepared as early in the project review or permitting process as possible, so that noise mitigation measures may be an integral part of the project design rather than an afterthought.
11. Definitions
 - a. A-Weighted Sound Level (dB): The sound level obtained by using the A-weighting filter of a sound level meter, expressed in decibels (dB). All sound levels referred to in this policy document are in A-weighted decibels. A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighting, as it provides a high degree of correlation with human annoyance and health effects.

- b. Community Noise Equivalent Level (CNEL): The equivalent energy (or energy average) sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m. The CNEL is generally computed for annual average conditions.
- c. Day/Night Average Sound Level (L_{dn}): The equivalent energy (or energy average) sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m. The L_{dn} is generally computed for annual average conditions.
- d. Equivalent Sound Level (L_{eq}): The sound level containing the same total energy as a time varying signal over a given sample period. Thus, the L_{eq} is a single-valued level that expresses the time-averaged total energy of a fluctuating sound level. For example, if 64 dB is measured for 10 minutes, 68 dB is measured for 20 minutes and 73 dB is measured for 30 minutes, the 1-hour L_{eq} is about 71 dB. The L_{eq} is typically computed over 1, 8 and 24-hour sample periods.
- e. New Development: Projects requiring land use or building permits, but excluding remodeling or additions to existing structures.
- f. Noise-Sensitive Land Use:
 - 1. Residential development, except temporary dwellings
 - 2. Schools-preschool to secondary, college and university; specialized education and training.
 - 3. Hospitals, nursing and personal care
 - 4. Churches
 - 5. Hotels and motels, bed and breakfast facilities
- g. Outdoor Activity Areas: Patios, balconies, and swimming pool areas of multi-family dwellings; backyards of single-family dwellings; designated areas for outdoor recreation and activity for hospitals, nursing and personal care facilities.
- h. Stationary Noise Source: Any fixed or mobile source not preempted from local control by existing federal or state regulations. Examples of such sources include industrial and commercial facilities and vehicle movements on private property (e.g., parking lots, truck terminals, auto racetracks, etc.)
- i. Transportation Noise Source: Traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by existing federal or state regulations. However, the effects of noise from transportation sources may be controlled by regulating the location and design of land uses affected by transportation noise sources.

CHAPTER 9

PUBLIC SERVICES AND FACILITIES ELEMENT

9.0

PUBLIC SERVICES AND FACILITIES ELEMENT

9.1 PUBLIC FACILITY IMPROVEMENT

Objectives

- A. It is the policy of the City that new growth shall pay its own way. Fees shall be established to pay for both needed facilities and incremental demands on existing facilities.
- B. A master plan for the development and funding of necessary services and utilities (including but not limited to storm drainage, water and sanitary facilities) shall be developed and adopted. Funding can be through the formation of an assessment district, entering into deferral agreements or direct developer funding of improvements. Distribution of cost for improvements shall be done in a fair and equitable manner.
- C. Facilities and services shall be coordinated with the General Plan land use goals and objectives.

Policies, Standards

- 1. The City shall continue to coordinate community irrigation ditch issues with local districts, private ditch companies, private land owners, and public agencies.
- 2. Irrigation ditches that require a 60-inch or smaller pipe shall be piped as a condition of approval prior to development on adjacent property.
- 3. Cost allocation for required ditch piping that exceeds 60-inches will be resolved on a project-by-project basis until such time that the City and the Merced Irrigation District approve a memorandum of understanding for this subject.
- 4. Continue to coordinate community irrigation ditch issues with local districts, private ditch companies, private land owners, and public agencies. Irrigation ditches shall be piped as a condition of approval prior to development on subject property.
- 5. Developers shall prepare an infrastructure and public services assessment as part of each annexation application determine infrastructure needs, feasibility, timing, and financing.

6. Prepare and implement Citywide infrastructure master plans which carry out adopted land use goals, objectives and policies and federal and State regulations. These master plans shall be implemented through various funding mechanisms including assessment district, property owner's associations user fees, development impact fees, mitigation payments, reimbursement agreements and/or other mechanisms which provide for equitable distribution of development and maintenance costs.
7. Require the extension and construction of infrastructure to proposed developments according to adopted elements and master plans. The City shall use reimbursement agreements or other financing techniques to reimburse developments for any oversizing cost, which may be required.
8. Coordinate urban growth management planning with public and private utilities.
9. Design storm water runoff drainage structures to decrease erosion.
10. Development in floodway areas shall be in accordance with regulations of the Federal Emergency Management Agency.
11. Development fee credit may be given for public improvements made by a builder but shall not exceed the amount of fees.
12. Developers shall construct all tributary facilities necessary to connect to major facilities, whether or not the major facilities have yet been constructed.
13. Temporary drainage facilities such as ponding basins may be constructed by the developer if the major facilities are not available, subject to City determination and approval. The developer will also be required to pay all applicable drainage fees in addition to constructing temporary facilities at his own cost.
14. Temporary drainage facilities such as shall be dedicated to the City with a reversionary clause which specifies that if the basin is abandoned within ten years, the property would revert to the original owner, subject to refurbishment of the site in a manner satisfactory to the City.
15. Upon the collection of adequate funds, the City will install major facilities in accordance with the master plan at the locations deemed most essential by the City, with due regard for community needs and projects from which fees were collected. To make the best use of funds, growth shall be encouraged in areas where it is possible to develop facilities incrementally.
16. To encourage groundwater recharge, ponding basins shall be designed as detention basins. However, pumping facilities shall be included in such facilities to handle peak flows and to provide for disposal of storm water into irrigation ditches when necessary. Stormwater inflow into irrigation district canals and pipelines shall be subject to existing or future

agreements by and between the City and the irrigation districts specifying maximum inflow, maximum service area boundary and any other limitation thereto.

17. New municipal water well sites should be planned which include pump, storage, pressure filtration and/or treatment equipment. They should have design, screening, landscaping and architectural improvements which make them compatible with adjacent land uses.
18. City may require industrial sewage pretreatment as determined by the strength of waste to conserve biological treatment capacity at the wastewater treatment plant. Water conservation measures should also be encouraged for industrial, commercial and residential uses to preserve hydraulic capacity at the treatment plant and to reduce impacts to the sanitary sewer system.
19. The City shall require the connection of existing and new businesses, residents and industries to the City's water and sewer system. The City shall establish fees which enable it to recover the costs of such connection.
20. Conditions of approval shall be implemented with each development to assure that the necessary water production, distribution and/or treatment facility is in place prior to issuance of a building permit.
21. A finding shall be made by the Public Works Department to document that an adequate supply of potable water can be provided to serve the domestic and fire suppression needs of each proposed development prior to approval by the City Council.
22. The City of Livingston shall cooperate with local water agencies to identify and resolve long-term water supply issues.
23. The City of Livingston shall explore the feasibility of the following long-range water resource issues including water storage, valving, and emergency back-up power supply.
24. Conditions of approval shall be implemented with each development to assure that the necessary sewer collection facility is in place an/or wastewater treatment plant capacity is available prior to issuance of a building permit.
25. A finding shall be made by the Public Works Department to document that sewer collection and wastewater treatment can be provided to serve each proposed development prior to approval by the City Council.
26. Monitor treatment plant operations and consider the related effects of land use changes when evaluating plan amendments.

9.2 LOCAL GOVERNMENT FACILITIES AND SERVICES

Objectives

- A. Provide high quality government facilities and services to the general public. Local government facilities and services shall be directed Downtown to the greatest extent possible.

Policies, Standards

1. Maintain innovative solid waste service and programs.
2. Public improvements identified in the City's Capital Improvement Program shall be consistent with the goals, policies and objectives of the General Plan.

CHAPTER 10
SAFETY ELEMENT

10.0

SAFETY ELEMENT

10.1 *Emergency Planning*

Objectives

- A. Reduce the potential for loss of life and property resulting from natural and manmade hazards to a minimum.
- B. Coordinate responses in the event of a local or regional natural or manmade disaster.

Policies, Standards

- 1. The City will maintain its emergency preparedness, including evacuation procedures, to address potential natural and manmade hazards. These procedures shall be developed in coordination with Merced County's emergency operations plans.
- 2. The City hereby adopts by reference those portions of the *Merced County Seismic Safety Element* that pertain to the Livingston Planning Area in satisfaction of the state requirement for the Safety Element.
- 3. All new buildings shall conform to state standards set forth in the Dangerous Building Code contained in the most current edition of the Uniform Building Code.
- 4. The City of Livingston shall conduct joint training exercises between local fire and law enforcement personnel to develop coordinated action in fire suppression, traffic and crowd control.
- 5. The City shall coordinate fire protection services with Merced County and neighboring communities, including consideration of mutual aid and instant aid agreements.
- 6. During major disasters, the primary coordinating official on behalf of the City shall be the City Manager.
- 7. Site plans and tentative maps for properties located in Section 23, Township 6 South, Range 11 East, MD B&M, otherwise located in the vicinity of Olive Avenue alignment and the UPRR, will be routed to the California Department of Conservation's Division of

Oil, Gas and Geothermal Resources Coalinga offices during initial environmental review for comment and appropriate conditions of approval.

10.2 Fire Protection

Objective

- A. An effective and well-trained Fire Department that will protect the community from fire dangers.

Policies, Standards

1. The City shall maintain fire department volunteer staffing of one volunteer per 500 residents.
2. The standard of one fire company for every 10,000 residents shall be used to evaluate fire protection services.
3. The City's fire service response goal shall be six minutes from "tone-out" to arrival on scene.
4. The City shall maintain a reliable water supply system that meets the fire protection needs of the community.
5. The City shall enforce the municipal code as it pertains to the abatement of fire hazards related to existing buildings, structures, and weed control.
6. The City shall support local, state and federal programs designed to inform and educate the public concerning fire prevention and suppression.
7. The City will coordinate with Merced County in the provision of fire protection services to ensure the maximum level of protection for all residences, commercial establishments and industries within the planning area.
8. The City will encourage the installation of private fire alarms and fire suppression systems.
9. The City will encourage local and regional educational institutions to develop fire prevention and suppression.
10. The City will encourage the community to become involved in promoting state and federal fire protection programs in school and civic functions.

10.3 Law Enforcement

Objective

- A. An effective and well-trained Police Department to protect the lives and property of the community.

Policies, Standards

1. Maintain a police staffing ratio of one sworn officer equivalent for every 1,000 residents.
2. Promote interagency training and cooperation to enhance the Livingston Police Department's effectiveness and readiness.

10.4 Flooding

Objective

- A. Protect the lives and property of residents from the hazards of flooding.

Policies, Standards

1. Consistent with Federal standards, the City shall plan for storm drainage facilities sufficient to address a 100-year flood event and require adequate storm drainage facilities to prevent flooding within the community.
2. The City will maintain the storm drain master plan for the City, including planned growth areas and require that development conform to it.
3. Development proposals shall be analyzed according to the *Storm Drain Collection System Study and Master Plan*. Development not within an existing *Master Plan* watershed area may be included in the boundaries of an adjacent area and subject to a revision of facilities and cost allocation thereof.

CHAPTER 11
HOUSING ELEMENT

11.0

HOUSING ELEMENT

11.1 Introduction

According to Section 65302(c) of the Government Code, a General Plan Housing Element is required of all local governments. This element must follow the prescribed guidelines prepared by the California Department of Housing and Community Development, and should:

1. Inventory the housing needs of the community for all socio-economic groups;
2. Analyze the availability of adequate sites for housing, considering the accessibility to services and the feasibility of providing public facilities;
3. Analyze and evaluate the obstacles and constraints in developing housing for all socio-economic groups, including market, governmental and physical constraints;
4. Formulate goals, policies and objectives which will serve as the desires of the community and the region in fulfilling the needs for housing;
5. Contain an implementation section which will act as the course of action and the timeframe for solving the problems and fulfilling housing and related needs; and
6. Include and Environmental Review.

The Housing Element was prepared through joint cooperation among the Livingston City Council, Citizens of Livingston and the Livingston Planning Commission.

The Housing Element is intended to serve both as a clear expression of the City's determination to address housing needs and problems and to provide comprehensive guidance based on quantified methodology to the City regarding housing needs. The Housing Element is also intended to promote coordination of City, State and Federal housing policy and programs in the attainment of decent housing for all.

The Housing Element is composed of ten major sections. The complete Housing Element will be revised once the updated *Housing Needs Assessment* has been prepared by the Merced County Association of Governments. This is expected by 2000. The Housing Element Goals and Objectives have been included in this General Plan update in order that they may be considered in context with

the other General Plan elements. The complete Housing Element remains in effect under separate cover.

1. Population Characteristics and Needs Assessment;
2. Household Characteristics and Needs Assessment;
3. Housing market Characteristics;
4. Non-Governmental Constraints;
5. Governmental Constraints;
6. Future Housing Needs;
7. Relationship of Zoning and Public Facilities to Residential Development;
8. Housing Goals;
9. Housing objectives; and
10. Housing Implementation programs.

11.2 Housing Goals (Section H in Complete Housing Element)

The principal goals concerning housing for the City of Livingston are as follows:

1. To provide decent housing in a satisfying environment for all person regardless of age, race, sex, marital status, ethnic background, sources of income or other arbitrary factors.
2. To provide housing selection by location, type, price, and tenure.
3. To provide for the development of a balanced residential environment with access to employment opportunities, community facilities and adequate services.
4. To encourage planned growth in the City by designating suitable sites for residential development.
5. To improve and conserve existing residential areas and housing stock.
6. To reduce residential energy uses within the City and to help decrease housing costs and conserve the resource.
7. To ensure citizen participation and timely plan update.

11.3 HOUSING OBJECTIVES (Section I in Complete Housing Element)

1. Promote and Ensure the Provision of Housing To All Income Groups

a) Analysis of Objective

- i. High increases in housing costs and slower increases in family income have caused a burden on income to afford housing.
- ii. New housing starts in recent years have been slow and predominantly directed to above median income families causing less housing for lower income groups.

b) Policies Related to Objective

- i. Encourage programs that provide housing for all income groups.
- ii. Seek Federal and State grants for use in providing and maintaining low-moderate income housing.
- iii. Encourage innovations in housing type and site design including mobile and modular housing.
- iv. Seek housing assistance and encourage programs for the elderly.
- v. Use zoning and land use controls flexibility to accommodate low income housing.
- vi. Discourage excessive concentration of lower income groups which contribute to income segregation.

2. Conserve and maintain the Housing Stock

a) Analysis of Objective

- i. Because of the increase in costs and low availability of housing, housing units are vital to meeting housing needs in the community.
- ii. Older units can be rehabilitated for use by lower income groups.
- iii. Low-income residents are least able and require assistance to maintain a home.

b) Policies Relating to Objectives

- i. All appropriate building related codes and standards should be enforced throughout the life of the housing unit before cumulative maintenance and neglect place the cost of rehabilitation above affordability.
 - ii. Federal and State grants should be used for rehabilitation when available.
 - iii. Education and technical assistance should be provided for maintenance, landscaping and repairs to all households.
 - iv. Tools and equipment could be made available
- 3. Stability, Desirability and the Appearance of Neighborhoods should be preserved
 - a) Analysis of Objective
 - i. Neighborhood appearance is essential to neighborhood price and vice-versa.
 - ii. Neighborhood appearance can affect financing and the location of new homes.
 - iii. Negative appearance can lead to over concentration of lower income groups, blighted and slum conditions.
 - iv. Allowing rezoning to commercial and industrial uses within residential areas can lead to undesirable neighborhoods.
 - b) Policies Related to Objective
 - i. Follow conservation policies of Objective "2".
 - ii. Encourage preservation of important neighborhood features and characteristics.
 - iii. Use effective weed abatement.
 - iv. Remove dilapidated units beyond the possibility of repair.
 - v. Carry on a positive public works and parks program to improve appearance and quality of neighborhoods.
 - vi. Discourage non-compatible zoning and land use which may affect neighborhood vitality.

4. Use Innovative and Effective Land Use to Facilitate Efficient Community Design and Functions

a) Analysis of Objective

- i. Improve centralization, attraction and vitality of the downtown.
- ii. Continue rejuvenation of older areas to improve and stabilize appearance and desirability.
- iii. When vacant lands are available they should be in-filled to promote efficient use of public services and maximize the investment in existing public facilities.
- iv. Innovative design can mix types of housing and provide a more effective use of open space.

b) Policies Related to Objective

- i. Encourage use of the “planned unit development” concept, including mobile home parks.
- ii. Consider innovative design to lower development costs and provide more affordable housing units.
- iii. Use flexible zoning regulations to enable transfer of over-zoned or non-compatible land uses to residential or effective land uses.
- iv. Discourage “leap frog” development which limits accessibility to public services for contiguous undeveloped land and increases energy consumption.
- v. Discourage developments in the fringe area of the City without proper infrastructure when vacant land is available within the City limits.

5. Use Effective Public Infrastructure to Accommodate Housing to the Most Effective and Efficient Means to Provide Housing for all Income Groups

a) Analysis of Objective

- i. The domestic wastewater treatment plant will be expanded and the major service collector line will be replaced and enlarged, but the location of housing will affect these lines.

- ii. Problems of storm drainage, water and accessibility will affect the location and availability of housing.
 - iii. Public improvements should be based on the comprehensive needs of the community, including housing, commercial and industrial uses.
- b) Policies Related to Objective
 - i. More residential land is needed to be zoned near the downtown.
 - ii. Suitable land for subdivisions should be encouraged in areas where there are the least constraints and public facilities are accessible and have capacity to accept growth.
 - iii. New developments should be encouraged where services are easily obtained.
- 6. Energy Conservation should be a Major Concern in the Provisions of Housing
 - a) Analysis of Objective
 - i. Conservation programs help offset increasing costs and the depletion of reserves of non-renewable sources of energy.
 - ii. More efficient and renewable energy resources, such as solar and wind power, should be encouraged where feasible.
 - iii. Low-density residential and leap-frog developments have contributed to excessive automobile dependence.
 - b) Policies Related to Objective
 - i. More efficient use of land and higher density development should be encouraged.
 - ii. Local government should support incentives to develop the use of solar heating.
 - iii. Filling of vacant lands within the City should be encouraged to make more effective use of transportation.
 - iv. The possibility and feasibility of public transportation should be the constant concern of the City.

7. To Evaluate Effectiveness of Housing Policies and Monitor Achievement of Program Implementation

a) Analysis of Objective

- i. The Housing Element, as part of the general plan, should be reviewed to determine future housing activity.
- ii. Too many decisions are based on shallow and limited concerning broad effects.

b) Policies Related to Objective

- i. Establish clear and specific procedures to enable citizens to participate in determining housing policies and programs.
- ii. Work toward meeting goals of the Housing Assistance Plan.
- iii. Provide for an annual housing progress report to summarize changes in the City's housing balance and report progress in goal achievement.
- iv. Incorporate policies and programs adopted herein.

APPENDICES

HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Appendix A-1

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Data Input Sheet

Brown-Buntin Associates, Inc. (BBA)

Project #: 98-008

Description: Existing Conditions – Livingston Noise Element

Ldn/CNEL: Ldn

Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Heavy Trucks	Speed	Distance	Offset
1	Highway 99	Dwight-Robin	36500	77		23	5	19.6	65	150	-4
2	Campbell Road	Winton-Cressey	16000	90		10	5	5	45	75	
3	Walnut Avenue	Cressey-Hammatt	6850	90		10	5	5	35	75	
4	Main Street	F-Hwy. 99	8500	90		10	5	5	35	75	
5	Hammatt Avenue	F-Walnut	6300	90		10	5	5	40	75	

Appendix A-2

FHWA-RD-77-108

Brown-Buntin Associates, Inc. (BBA)

Predicted Levels

Project # : 98-008

Description: Existing Conditions -- Livingston Noise Element

Ldn/CNEL: Ldn

Hard/Soft: Soft

<i>Segment</i>	<i>Roadway Name</i>	<i>Segment Description</i>	<i>Autos</i>	<i>Medium Trucks</i>	<i>Heavy Trucks</i>	<i>Total</i>
1	Highway 99	Dwight-Robin	65.1	59.5	68.9	70.8
2	Campbell Road	Winton-Cressey	64.1	59.8	64.3	68.0
3	Walnut Avenue	Cressey-Hammatt	57.3	54.5	59.7	62.4
4	Main Street	F-Hwy. 99	58.3	55.4	60.6	63.3
5	Hammatt Avenue	F-Walnut	58.6	55.0	59.8	63.0

Appendix A-3
 FHWA-RD-77-108
 Brown-Buntin Associates, Inc. (BBA)
 Noise Contour Output

Project # : 98-008
 Description: Existing Conditions -- Livingston Noise Element
 Ldn/CNEL: Ldn
 Hard/Soft: Soft

Segment	Roadway Name	Segment Description	-- Distances to Traffic Noise Contours --				
			75	70	65	60	55
1	Highway 99	Dwight-Robin	78	168	363	782	1684
2	Campbell Road	Winton-Cressey	26	55	118	255	550
3	Walnut Avenue	Cressey-Hammatt	11	23	50	109	234
4	Main Street	F-Hwy. 99	13	27	58	125	270
5	Hammatt Avenue	F-Walnut	12	26	55	119	257

GENERAL PLAN MAP



General Plan

LEGEND

- Circulation System
- Southern Pacific Railroad
 - Highway 99
 - Arterial Streets
 - Collector Streets
 - Minor Collector Streets
 - (Final location to be determined)

- Land Uses
- Public Facility
 - General Industrial
 - Limited Industrial
 - Park / Open Space
 - Low Density / Estate Residential
 - Medium Density Residential
 - High Density Residential
 - Neighborhood Commercial
 - Community Commercial
 - Downtown Commercial
 - Service Commercial
 - Highway Commercial

Reserve

Refer to Land Use Element Policy 3.1.A.7
(Final location to be determined)

- Industrial Reserve
- Public Facility Reserve
- Commercial Reserve
- * Park Reserve
- Urban Reserve

- 2020 Phased Growth Boundary
- 2030 Phased Growth Boundary
- 2040 Phased Growth Boundary
- Sphere of Influence



1000 0 1000 2000 Feet



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Engineering

Architecture

Planning

Land Surveying

GIS/GPS

Biology

-
- Visalia (559) 733-0440
 - Sacramento (916) 784-7823
 - Fresno (559) 436-6626
 - Bakersfield (661) 835-8300
 - Reno (775) 324-1212



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